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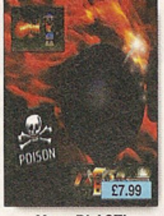
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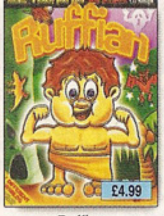
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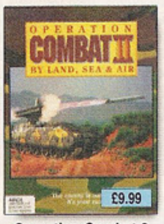
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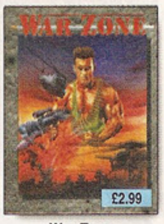

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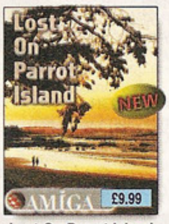
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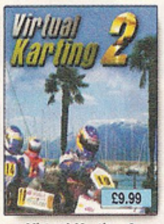

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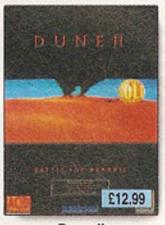

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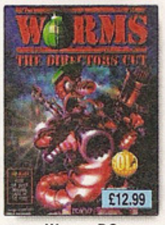

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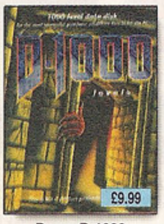
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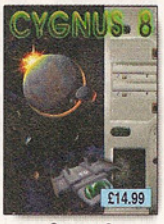

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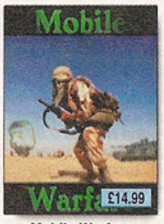
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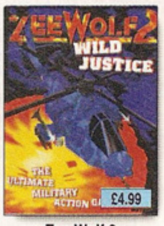
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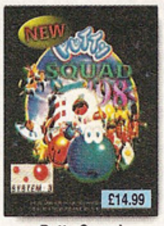
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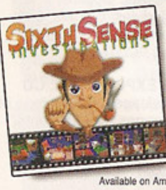
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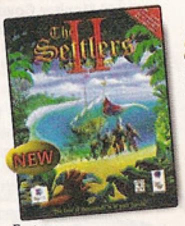
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The Settlers II
£25.00 CD-ROM
Is Coming To The AMIGA



Pre-Order your copy now at the special price of just £25.00
Order by Credit Card and no money will be taken until day of release.

Available soon on
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Requires : AGA or
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Features
*Build a medieval empire, conquer neighbouring kingdoms and defend yourself from intruders!
*Command hunters, farmers, miners, soldiers and more!
*Create elaborate settlements from over 30 different building types!
*Direct your animated subjects throughout your kingdom where thousands may be active on-screen simultaneously!
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*Zoom in and follow any one of your subjects as they perform their assigned tasks!
*Enjoy digitized speech, highly-detailed, hand-painted graphics, on-line help and more!

Settlers 2 should be available around the middle of March 1999.
Pre-Order your copy now and pay just £25... *Once released : £29.99*

The sequel to "The Settlers" is a delightful god sim is set in Medieval Times. After fighting a losing battle with the raging sea, the brave people find themselves stranded on an apparently uninhabited island. You must lead these survivors on the ultimate quest - World Domination!

Order your copy of "The Settlers II" today and discover why over half a million copies have been sold to PC and Mac users worldwide.

Month **In View**

This is a bit weird, isn't it? Normally Nick does these bits, but I guess that now it's down to me, **Ben Vost**.

If you're wondering exactly why we're using an old shot of me with red hair it's because this issue comes out just after Comic Relief's Red Nose Day in the UK. If you're an overseas reader you almost certainly won't be aware of this, but it's a charity event that raises millions of pounds a year for poor children in this country and abroad, mainly in Africa. If you've got a quid or two left after you've bought this issue, why not pop it in a collection box? I'm sure you'll find one nearby.

Another thing you may not be aware of if you're an overseas reader is the tradition of the April Fool. It's repeated all over the world in different guises – like the Poisson D'Avril in France – but in our case there's a spoof article in the issue, so have fun working out which one!

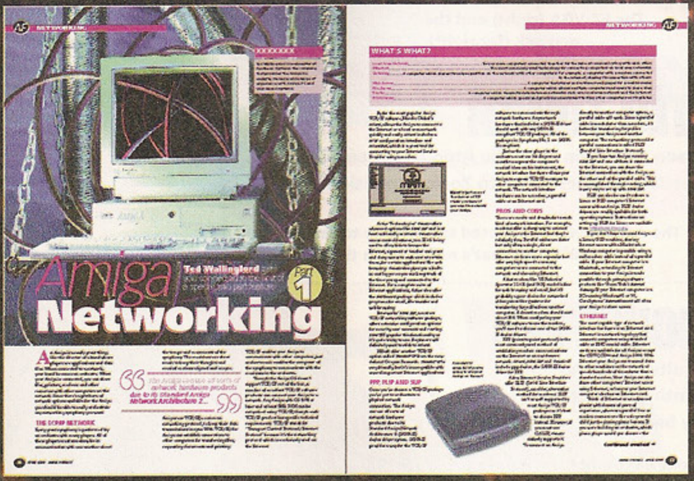
Anyway, aside from that, here I am presiding over *Amiga Format* as its new editor. Nick's doing fine and he'd like to thank all the *AF* readers for their good wishes for his new mag, *Computer Publishing*. At the moment he's busy designing the different sections in the mag to find out what sort of thing people are going to want, but he's found the time to write us a new tutorial on ARexx and also to review a couple of bits of kit from Eyetech.

As for me? Well, it feels as though I've been through the mill on this issue, but I'm glad to say that we'll have a new staff writer next month and it may be someone you all recognise. We'll see. He should be able to take up some of the slack where Nick left off, and it'll free me up to make this magazine not only the best Amiga mag you've ever read, but quite possibly the best mag overall that you've ever read. As long as you don't read many other mags, I suppose…

We've had such a packed issue this month that we've even needed to leave some stuff out to go into the next issue, so there should be plenty here for you to get your teeth into, and also lots to look forward to. Now, time to get back to the grindstone…



Ben Vost
Editor



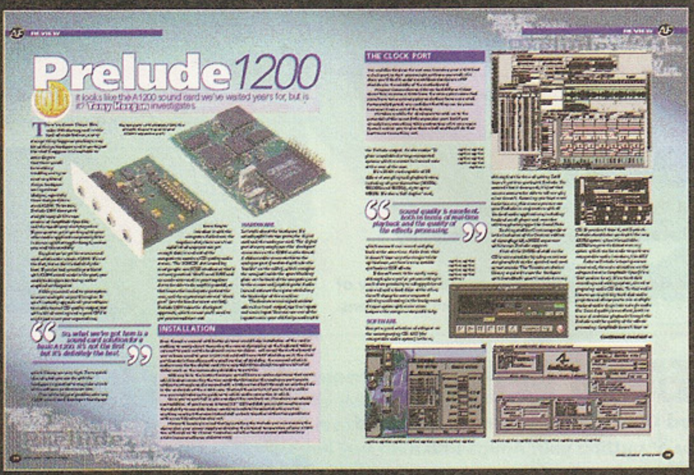
Amiga Networking

AMIGA NETWORKING PAGE 16
Ted Wallingford gives you the low-down on getting your Amiga networked in the first of a two-part feature.



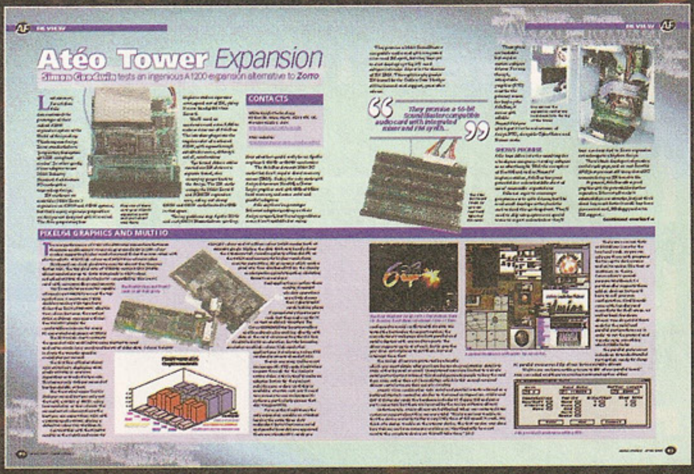
Napalm

NAPALM PAGE 26
The most eagerly awaited game of 1999 so far finally arrived on our doorstep this month. See what I thought of it.



Prelude1200

PRELUDE PAGE 44
As well as his music tutorial, Tony Horgan shows you how to make sweet 16-bit music on your A1200 using this new bit of kit.



Atéo Tower Expansion

ATEO TOWER PAGE 50
It's been a long time coming, but Simon Goodwin gets his teeth into the Atéo Tower and Busboard at last.

AMIGA FORMAT Contents

ISSUE 122 APRIL 1999

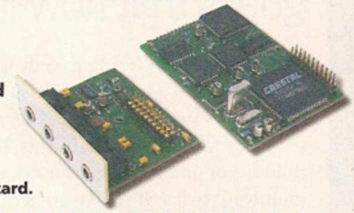
AF NEWS

AF REGULARS

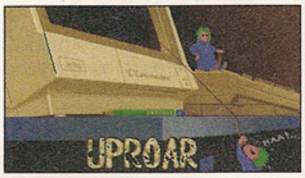
AF CREATIVE

NEW Tutorials

AF SERIOUSLY AMIGA



The Prelude A1200 sound card.



A collection of Paula modules provided on disk accompany the Sound Box.



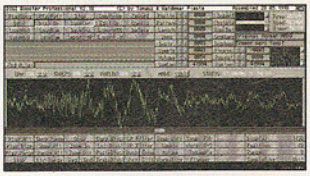
The EZ-VGA (right) and the genlock (far right).



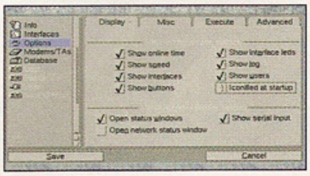
The Atéo Tower is adapted specifically to house A1200s, but that's reflected in the cost.



Looks a bit odd for a mouse...



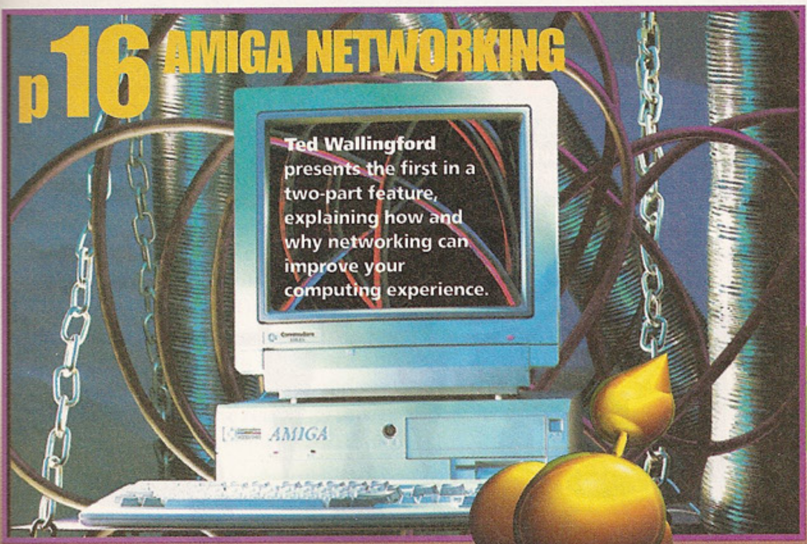
It's the latest tracker to be released on the Amiga, but can it improve on its rivals?



The *GenesisPrefs* program contains plenty of useful options.



It looks impressive, but is it worth it?



p16 AMIGA NETWORKING

Ted Wallingford presents the first in a two-part feature, explaining how and why networking can improve your computing experience.

AF CD-ROMS

88 AFCD38

Heretic, *Hexen* and a *Napalm* demo should keep gamers happy, and with 32,300 files, there's something for everyone on this CD.





p20 CUCKOO CLOCK

This is what every Amiga needs – a sampled cuckoo singing on the hour, accompanied by your CD drawer popping in an out in true cuckoo clock-style. **Don Swimigoon** shows you how to become the envy of your friends with this trick...

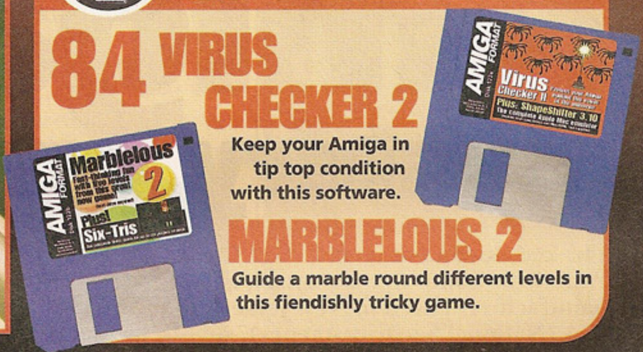
AF COVERDISKS

84 VIRUS CHECKER 2

Keep your Amiga in tip top condition with this software.

MARBLELOUS 2

Guide a marble round different levels in this fiendishly tricky game.



AF COVER STORY



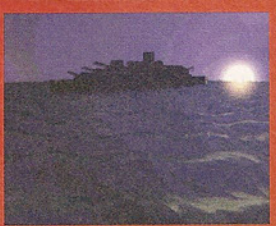
Competition!

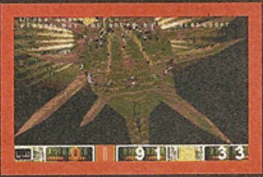


p26

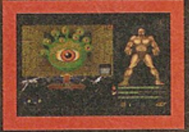
The most eagerly anticipated game of the year has arrived! **Ben Vost** looks at *Napalm* on page 26 and you could win a copy in our compo on page 39.

SCREENPLAY





Some of the cracking games coming your way soon, plus a facehugger from *Quake Aliens*.









WHAT'S UP?

CPU details revealed
The new Amiga chip set is literally going to be out of this world.

Amiga Netscape
Planned support for Java, *Real Video*, *Real Audio* and more.

Show news
Details on early and upcoming shows.

WORLD NEWS

AmigaNG mystery processor REVEALED!

A leaked document from Amiga Inc, ACC (American Computer Company, a chip manufacturer based in New Jersey) and America's NSA (National Security Agency), sent to us by a source who cannot be named, reveals details of the new Amiga's CPU.

The document, a hasty photocopy taken in secret, shows the plans for the new machine in some detail and includes the chip at its heart, with about four pages of documentation on the capabilities of this processor. We didn't believe our eyes when we first saw the pages of material that had been sent to us, but a few hush-hush phone calls to the right places have convinced us this isn't some monstrous hoax.

Our source had this to say: "These plans were left on the table after a meeting between the heads of these companies – Jack Shulman, head of ACC, Jeff Schindler (and Ted Waitt) of Amiga Inc./Gateway, and an agent from the NSA. The reason he was there is because this processor is based upon the designs reverse-engineered from chips in the UFO at the Roswell crash in 1947, and although ACC is under licence from the US government to produce new chips from this design, so far they haven't incorporated them into any third party equipment."

However, as the NSA man suggested, the US government could really do with capital influx, right now and for the next 10 years, to help with the expected failure of the US social security system as the number of people out of work or retired outweighs the amount of money paid into the scheme by those in work. The right to manufacture a machine based upon this device has only been granted as long as Amiga Inc. can continue to develop the machine for at least the next 10 years.

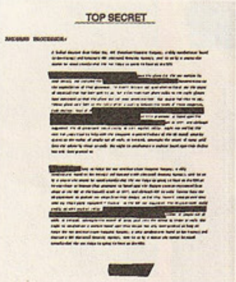


Needless to say, our source reckons that with these designs Amiga Inc. could rapidly overtake Microsoft and Intel as the premier computer company in the world. We have to say that we agree, having actually seen this incredible document ourselves.

> "...Amiga Inc. could rapidly overtake Microsoft and Intel as the premier computer company in the world."



We can't actually show you any shots of TCAP since we haven't managed to get any yet.



The processor, known only as TCAP, is a direct result of experiments at the infamous 'Area51' alien study centre in Nevada, and is supposed to be the second alien development (after the transistor which made much of today's computing power possible). It is capable of storing more than three terabytes of information on the processor itself (that's 3,000Gb!), and it'll operate at speeds in excess of 12,000GHz. A single operation has been calculated as taking only .000000000000002 of a second (that's about 500,000,000 MIPs).

The only question is how long Amiga Inc. can hold onto this technology. We've been told that already well-known chip manufacturers such as Cyrix, Hewlett-Packard, AMD and Philips are busy trying to reverse engineer the chip because ACC won't keep the technology secret much longer since they maintain that it would break the Outer Space Treaty that governs such matters.

The central processor suite behind the new Amiga has been whispered about since last May when Amiga Inc. first gave some idea of its capabilities, and many different chip manufacturers were proposed as the developers, but it's doubtful that anyone could have predicted this development.

If you remember our report last year, it was stated that this mythical MMC (variously reported as Magical Multimedia Chip and Mystical Multimedia Chip, among others) would be able to offer real-time decoding of four HDTV MPEG-2 streams, with Dolby Digital surround sound, without impinging on the central processor at all, and that it could model 400 million textured polygons a second, but it's expected that TCAP will offer so much more than this it's literally unbelievable.

Amiga Format will, of course, be bringing you the definitive news on this deal as soon as we have it. We know that you'll be desperate to get more info on this as it happens so we've set up a special contact number that should have all the latest details on the news as it happens. You can reach it by calling 01225 822744.

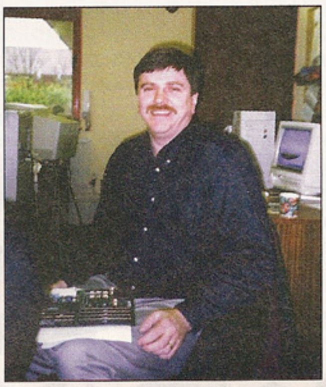
BoXeR delay?

Blittersoft have recently informed us that the BoXeR has been delayed due to its inventor being ill. It seems that Mick Tinker has been struck down by a case of severe flu, just as many of us have been this winter, and has been out of action for several days. This has held back the release of this replacement Amiga motherboard by a couple of weeks.

Even so, we've been told that the board should be going off to the prototypers by the end of February and we should get an early board some time in the fortnight after that. There's also an additional deadline imposed on Mick Tinker, that of the Amiga '99 show in St. Louis, which will almost certainly be over by the time you read this.

American dealers Anti-Gravity Systems will doubtless want a board to show people (in America the BoXeR has the equally silly name of Neila).

Let's hope Mick Tinker is fully recovered by the time he reads this.



However, Blittersoft have given us the new specs for the BoXeR:

- 64-bit design for maximum performance with the PPC/G3 processor boards.
- Twin independent IDE ports supporting Modes PIO 0-4, DMA Modes 0-2, which will be upgradable via Flash to UDMA, giving high transfer rates with low processor overhead.
- Replacement of the Buster chip.
- Full parallel port implementation which will allow use of more parallel port peripherals.
- A different board layout to accommodate Video Toaster.
- Implementation of enhancements to increase chip RAM access times.

Vital Horgan



Have you ever pretended you use a PC instead of an Amiga? I have. Shame on me, I know, but sometimes it just makes life so much easier. Think about it. How many times have you been into a computer shop or phoned a mail order company to enquire about a product, only to have the sales person virtually refuse to supply you with what you want because you mentioned you were going to use it with an Amiga?

The list of things I've been told I can't do with my Amiga gets longer with every day. Apparently I can't connect it to the Internet, I can't use a Zip or Jaz drive, I can't do MIDI sequencing ("I should know, I used to have one and it's got no MIDI ports!" said the obliviously ill-informed music shop assistant), I can't use CD-ROMs designed for PCs, I don't have a 16-bit sound card because they don't exist and I certainly can't do hard disk audio recording; after all, I'd need to be able to connect a hard disk to my Amiga for that.

I've learnt not to mention the type of computer I use unless it's going to be necessary or a point of interest. I want to be able to go into a shop and buy some equipment for my system without having a fight about it. I don't want to be treated like some kind of technologically incompetent fool, even if I can see the terrible irony in the situation.

There's a time and a place for Amiga-evangelism and it's not on a Saturday afternoon in PC World.

By the way, please feel free to let us know if you think I talk complete rubbish in this little column. At least then I'll know that someone reads it...

Tony Horgan

aMozillaX update

After speaking to Ben Rothwell, the project manager in charge of porting *Netscape* to the Amiga, we can bring you some new details of what will be in the final version.

Ben told us that *aMozillaX* (as it will be called) will feature both JavaScript (ECMA) and potentially Java too, contrary to earlier news items. It will offer Java support through Mocha, one of the non-licensed ports of Java that's being developed now. Ben also told us that they were currently trying to get licences to include *Real Audio*, *Real Video* and *Shockwave* ports in *aMozillaX*, which would pretty much include 90% of everything that most people use on the web. It will also open up Amiga owners to being able to bank online, get subscriptions to magazines (hint, hint) and so on.

The porting group also intend to include full HTML 4 and Unicode support, meaning that the browser will be suitable for use in countries like Japan that can't use the ISO-Latin standard. It will also have full support for HTML 4 features like CSS or Cascading Style Sheets, a method by which you can set up style tags for the layout of your pages so you don't have to keep using that pesky <font> tag. Unfortunately, this also means resurrecting the dreadful <blink> tag...

aMozillaX won't just be the web browser though. It will also include features like *Messenger* (*Netscape*'s email and news package) and an integrated WYSIWYG HTML editor. However, much like *Netscape* on other platforms, these aren't amazingly good so you'd probably be better off sticking to *YAM* and *NewsRog* for the time being.

Because of its cross-platform presence, *Amiga Netscape* will offer a standard bookmark and mailbox configuration file that can simply be copied to other platforms and immediately used as is. *aMozillaX* will also have other expected features like SSL and PGP support.

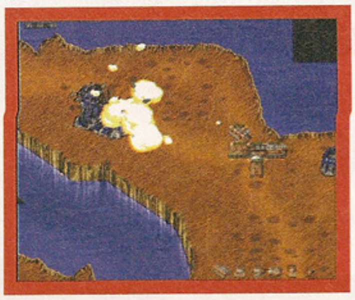
Finally, Ben and the team hope to offer one thing which none of the Amiga browsers has yet managed to, and that's the decent printing of web pages. The printer module for *Netscape* should offer quality comparable with *Netscape* on other platforms, with the addition of full *TurboPrint* support.

For more news about this project, keep a keen eye on http://www.amozilla.force9.co.uk/

Napalm delays?

While we got a gold master of *Napalm* from clickBOOM to review this month, we were also expecting full copies to arrive before we finished the review, just to compare them. As it was, we'd finished the review before the final copies turned up, but there was a reason for this.

We got a call from Birmingham airport UPS saying they had a parcel for us but that they were a bit worried because on the side of the parcel it listed the contents as being "10 *Napalm*". They were worried that the parcel might contain explosives, so they contacted me.



Advice: be wary of large parcels that say they contain napalm!

I laughed and told them that they were computer games. Needless to say, as befits customs-type people, they didn't have much of a sense of humour (it was too much to expect someone at the UPS plant to be a big Amiga fan, I guess) and they merely grunted their approval.

The next day I got the parcel, which had no doubt been passed through every X-ray machine in Brum airport. Anyway, we have it now and you should have your copies if you pre-ordered the game.

clickBOOM also have an add-on mission disc planned for release soon if *Napalm* turns out to be popular.

Continued overleaf ➡

100 issues ago

AF22 May 1991

AMIGA FORMAT



We look at what was going on in the Amiga market 100 issues of *AF* ago…

- **Cover feature:** Take the world and change it. An eight page feature written by Jason Holborn and Maff Evans which mainly rounds up video digitisers and sound samplers. Oh, and scanners, although that part of the feature is bizarrely separate from the first bit and resides at the back of the mag.
- **On the disks:** Just one disk with a demo of *Gods* by the Bitmap Brothers, a sample editor and a picture.
- **News:** Covered new video titling, 3D and structured drawing packages, *ZVP Video*, *4D Pro* and *Professional Draw* respectively. There was also a mention of Genisoft, a spin-off division of HB Marketing that Ben designed the brochures for.
- **Prices:** Commodore were just starting to advertise their new Screen Gems pack for the Amiga, which got you an A500, 1Mb RAM and the software titles *Days of Thunder*, *Back to the Future II*, *Shadow of the Beast II*, *Clive Barker's Nightbreed* and *DPaint II* for the ultra-low (at the time) price of £399.99.
- **Games reviewed included:** *Railroad Tycoon* (Microprose) 92%, *Armour Geddon* (Psygnosis) 85%, *Chuck Rock* (Core Design) 80% and *Supercars 2* (Gremlin) 80%.
- **Serious products reviewed:** *Saxon Publisher* (Surface UK £199), *Scala* (Silica £249), *Printers Inside and Out Book* (DTBS £29.95).
- **Notes:** This issue came with a free sampler of *Amiga Power* and had an ad for both *Amiga Power* and *Amiga Shopper*, which were due to start that year.
- **Pages:** 210
- **Cost:** £2.95

Gasteiner show

Long-time Amiga retailer Gasteiner recently played host to the first of a number of small independent Amiga computing shows to take place this year. Chris Green reports.

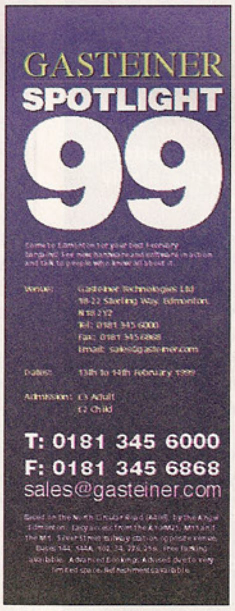
The show, which took place at the Gasteiner shop in Edmonton, was only a small affair with about eight stands crammed into the tiny back room of the shop, selling a variety of products, but it still produced a large turnout of users who were keen to pick up a bargain or two for their machines.

Exhibitors included HiSoft, who had the largest stand, selling their vast selection of Amiga products, including the popular Squirrel PCMCIA SCSI interface. Gasteiner themselves were selling everything from scanners to mice and there was also a selection of private traders offering a mixture of new and second-hand hardware and software.

The trend towards small Amiga shows in addition to the much hoped for World of Amiga show seems to be growing, particularly among the large number of user groups outside the capital whose members can't always make the long trek to London for WoA.

The Kickstart User Group have just held an event of their own in Surrey, and several other user groups, including Power Amiga and SEAL, are planning to host similar events scheduled to take place later on in the year.

While the World of Amiga show is still expected to take place this year, it's unlikely to be at its usual venue, the Novotel exhibition hall in London's Hammersmith, but it will probably take place somewhere in the capital.



Was it all that you expected or something less? Let us know.

User Group news

Although user groups are springing up all over the place now, it seems that the north half of London has been a bit slow to catch up with the trend. It might have something to do with the fact that calling such a user group NLAUG would put a strange taste in anyone's mouth.

Now it's time for North London to catch up. After some head scratching, the members have decided to call the group "ANT" (Amiga North Thames). We work as a team, we like picnics and we bite… okay, maybe not that last bit.

Founded by the man behind the Amiga Yellow Pages, Michael Carrillo, the new user group for people north of the Thames is bursting with energy and is growing fast. ANT promises to be an exciting and active group of individuals, hoping to cater for the needs of the north London Amigan.

Whether it's friendly advice, demonstrations of new software, presentations of existing software and how to get the most from it, the chance to meet up with some real Amiga celebrities or simply a chance to exchange a few words with other people with the same interests, ANT say they can offer the lot.

Contact Michael Carrillo at michael.carrillo@ukonline.co.uk or you can call him on 0181 5247544.

Also, since AmigaSoc launched the Soul Hunter in October 1998, the database of lost souls has been steadily increasing on a daily basis. The Soul Hunter offers something that isn't available on any other Amiga website. Amiga users in the UK who don't live close enough to an established user group can sign up to the Lost Souls database. However, rather than simply placing all the names in a database, the Soul Hunter periodically compares the geographical location of each member using AmigaSoc's UK postcode technology in an attempt to find users who are within easy travelling distance of each other.

In some cases there have been sufficient people living in close proximity to each other to facilitate the creation of a new user group. AmigaSoc are pleased to announce that at least two new user groups have been started with the help of the Soul Hunter. In fact, the Soul Hunter has proved so popular that even people from other countries have been trying to get onto the database.

The success of the Soul Hunter, and indeed the Lost Souls database, depends on the input of Amiga users who aren't currently members of an existing Amiga user group. For those users who don't have an Internet connection, get down to your local library or CyberCafe and sign up right now at: http://uk.amigasoc.org/usergroups/exls.html

Alternatively, if you don't have Internet access at all, send your user group's details, most importantly including your post code, to this address:

Lost Souls, c/o ANT, 34 Marmion Close, London, E4 8EW.

AmigaSoc is the only organisation of its kind to have a fully licenced copy of the UK postcode database (with Ordnance Survey references) which is worth over £2,000.

It's also the only UK Amiga organisation to have been awarded the official Amiga Inc. seal of approval.

News about afb

The Amiga Format Bulletin (afb) is proceeding strongly. There are already nearly 300 subscribers at the time of writing and we'll be putting digests of the list on the CD from now on to give a better idea of its content.

At the moment the list is running pretty high for messages, with an average of over 70 new emails every day, so users who want a lighter version will be disappointed.

However, you can change your subscription so you just read the mailing list on the web when you have time, or set it so you only receive digests or summaries of what goes on.

In addition to the emails, the afb provides the useful service of offering an Amiga calendar which tells you when new issues will be available, as well as deadlines for news and CD submissions. It also has folders which contain useful URLs, hints and tips, plus a poll service which can allow you to set a topic and poll the readers of the list.

You can subscribe to the afb by going to the following website and signing up: http://www.egroups.com/list/afb/

If all you want is news on when the next issue will be out, we offer that at: http://www.egroups.com/list/afb-announce/

It's worth joining both since information won't be cross-posted.

Christmas compo winners



We had thousands of entries for our Christmas competitions. Were you one of the lucky winners?

GAMES DRAW
Kay Are Ulvestad, Vatne, Norway.
Liam Warren, Manchester.
Mike Dongworth, Aberdeen.
Christer Köhn, Trollhättan, Sweden.
Kevin Gill, Hull.

OPUS DRAW
Alex Vakkas, Athens, Greece.
Andrea Agostini, Rovereto, Italy.
Inge Christensen, Viborg, Denmark.
Alan Buxey, Brighton.
M. P. Slyfield, Marlow.

TYPHOON DRAW
Christopher N. Hindley, Deeside.
Derick Norman, Shrewsbury.
Dim. Rainakis, Hellas, Greece.

EMULATION DRAW
2 Highgate Close, Birmingham.
Ognjen Vvlyicak, Twyford.
E. A. Dornan, Dunoon.
Gerald Mellor, Linlithgow.
Chris Ritchie, Arbroath.

GAS DRAW
D. Flynn, Hayes.

NC2 DRAW
P. Wilkins, Pontypridd.
P. J. Mahalovich, Kaitaia, New Zealand.
Aller Persson, Davao del Sur, Philippines.
Brett Halligan, Southport.
Steve Jackson, Chesterfield.

EPIC DRAW
K. A. Valentine, Helston.
Glenn Hisdal, Norway.
Robert Bobanovic, Croatia.
Andrew Whitlam, Germany.
Gregor Nemec, Slovenia.
Chris Burton, Portgarreg.
Michael Knight, Australia.
A. Ramautar, Holland.
David Wadsworth, Preston.
Ph. Dumont, Lombry, Belgium.

Other news

QNX AND CRISTINE
QNX have signed up with French company BCI to offer an in-car navigation system that offers a bit more than the others. It'll be called Cristine and will integrate traffic and weather data, offer mobile phone and email support and will be ideal for commercial vehicles like ambulances, taxis, couriers and company fleets, creating a mobile office environment to ensure that every erg is extracted from company employees.

While people using their mobiles in traffic in the past have been criticised by safety experts, it'll be nothing when compared to people doing their email! The system is already on sale in France at a price of 1000FF for a two year lease.

PERMEDIA 3 LAUNCHED
3DLabs' newest graphics chip, the Permedia 3, was launched on February 16th. It features support for 32-bit true colour displays, a full 32-bit Z-buffer and up to 32Mb of graphics RAM to deliver high-quality picture realism, as well as exceptional 3D and 2D performance.

With a fill rate of 125 million multi-textured pixels-per-second, Permedia 3 offers the kind of graphics power desired by Amiga fans worldwide.

3D Labs expect to start shipping the Permedia 3 in volume by the second quarter of 1999.

NEC DEVELOPS SUPERFAST DRAM.
NEC have developed a 64Mb (megabit, not megabyte) DRAM (dynamic random access memory) chip with access speeds of only 6.8ns. The new chip is designed to be embedded in logic chips as part of a scheme to try to create a device that industry watchers have already granted a TLA – the SOC, or "System On a Chip".

This gives the chip much faster speeds than currently exist and means that CPUs will probably have much larger caches onboard, thus speeding them up considerably too.

THE MAC AFFECTED BY Y2K PROBLEMS?
Although Apple claim their systems aren't affected by the so-called Millennium Bug, it seems that all is not well. Apple software company Pedagoguery Software have found that, by following Apple's strict programming guidelines, errors which will fall foul of the turn of the century can be introduced into applications. Basically, they say that programs using the Apple system routine "StringToDate" will start having problems next year with files that have dates in them. This might simply be a ploy by Pedagoguery to sell their audit software, *Y2KSA*, but it could also be a genuine problem for the company.

Latest News in Brief

NETCONNECT 2.2 INTERNET SUITE NOW SUPPLIED WITH EYENET PACKAGES



If you are not yet on the Internet, now is the ideal time to sign up. Just £139.95 gets you a 56K modem, the Netconnect 2.2 internet software suite and a full internet connection with 10 email addresses, 25MB web space and unlimited web access with no ongoing charges (other than 0845 local call charges) ever! And, unlike other 'free' services, there is no extortionate support charges to get your Amiga set up, and no requirement to supply a personal profile for direct mail/email advertisement use by the ISP. In fact, the whole Eyetech package with modem and Amiga software costs less than many ISP's charge for 12 months connection alone!

A CHIP-FREE DIET CAN BE VERY UNHEALTHY FOR YOUR AMIGA

Eyetech first introduced the buffered IDE interface to Amiga users around three years ago in response to data corruption and instability problems resulting from the use of unbuffered interfaces being sold by some suppliers for attaching a CDROM to an A1200. The buffered interface (which needs at least 3 chips and a handful of other components to do its job properly) puts back the electronics that were left out of the A1200 design (but included as standard in the A4000 and all PC designs). However, it has been brought to our attention that low cost, chipless, unbuffered interfaces are now being advertised as buffered interfaces in some quarters. Beware - these interfaces can cause data corruption and/or permanent damage to your Amiga and peripherals if the total length of all data cables (from all connectors) exceeds 30cm/12inches. You have been warned!

AFFORDABLE ULTRASLIM 2.5" 3.2GB HARD DRIVES INTRODUCED

We have managed to obtain stocks of brand new 3.2GB 2.5" hard drives, which are just 9mm high for a relatively small premium over their 3.5" equivalents. This means that two of these ultra-slim drives can be stacked on top of each other (for a total of 6.4GB) in the standard 2.5" drive cradle of a desktop A1200 - making it an ideal portable multimedia presentation platform. As both drives in this configuration are closely coupled to each other and the A1200 motherboard via a short cable a buffered interface is not required. The drives are supplied complete with Workbench 3.0, high quality utilities and MME multimedia authoring software preinstalled and configured to the Toolsdaemon menu system. The drives are equally suitable for use in the A600 or the CD32/SX32 combination.



NEW LOW COST, HIGH PERFORMANCE, APOLLO ACCELERATORS NOW AVAILABLE

Apollo have completely redesigned their range of '030 accelerators making them better value than ever. The Apollo 1230TurboPro Mk3 now features:

- 1 or 2 (optional) simm sockets for up to 64mb memory
- Full memory management unit (MMU) and floating point processor (FPU) as standard
- Mix and match' any simm sizes up to 32mb each when 2 simm sockets are fitted
- Asynchronous bus interface for the fastest possible memory access times
- Remapping of all memory addresses to avoid potential PCMCIA conflicts
- Equally suitable for use in a standard desktop A1200 or in a tower system.
- Amazingly low price - just £59.95 or £69.95 with 2 simm sockets.

As an added incentive we are also giving 20% off memory prices when purchased with an Apollo 1230/40 Mk3 Pro.

21MIPS 040/28 APOLLO ACCELERATORS INTRODUCED AT A PRICE LOWER THAN THE 19MIPS 040/25

The entry-level 040 Apollo accelerators from Eyetech has now been uprated to 28MHz/21MIPS. Not only does this boost performance, but also makes the board compatible with most higher speed 72pin EDO PC simms.

Even better, we have managed to reduce the price of the new board to just £124.95!

EYELINE DIRECT LAUNCHED

A monthly Amiga newsletter delivered to your door for just 25p a copy!

In the fast changing world of computers and peripherals, and with an ever-expanding portfolio of Amiga products, we are finding it increasingly difficult for us to provide Amiga owners with comprehensive technical and pricing information via our monthly advertising pages alone.

That's why we are launching Eyeline Direct - a monthly newsletter for Amiga users full of hints and tips, in-depth technical information on our latest products and - of course - up-to-date pricing information. In addition it has a section devoted to monthly special offers which will only be available to Eyeline Direct subscribers.

The normal price of Eyeline Direct is just £6.00 for 12 issues including UK postage - but if you subscribe before 30 April 1999 we will send you all 12 issues for half price - that's just 25p per copy including postage!

As well as our current product range we will be including a section on the answers to the most frequently asked questions on our support line - and top hints and tips from other Amiga users - so you can build up an easy-to-access reference manual for your A1200. Issue 1 will be published at the end of March 1999.

To subscribe to Eyeline Direct ring the Eyetech sales team on 01642 713185 or write to us enclosing your delivery address and payment details.

EYELINE Direct

COMPATABILITY KITS NOW AVAILABLE FOR MOST POPULAR A1200 ADD-ONS

In many ways the A1200 has only become a seriously usable computer in the five years since Commodore's demise. This is entirely down to the ingenuity and dedication of third party developers, often working late into the night for the hope of a modest financial return - and without having overall guidelines to work to. Despite the individual success of these developments the lack of a structure for overall coordination between different developers has meant that many A1200 expansion options can be mutually incompatible - either physically or electrically or both.

Current accelerators, internal flickerfixers, the BVision card, the IDE Flyer, video slot adapters, Zorro adapters, clock port accessories, Catweasles and other add-ons all vie for the A1200's real estate, and often there is a level of electrical incompatibility as well.

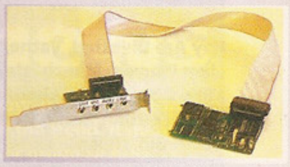
The range of potential conflicts - and their resolution - is too large a subject to cover in an advertisement feature such as this: it will however form one of the items covered in a forthcoming Eyeline Direct (See separate news story). Suffice it to say that we at Eyetech have been working with many of the suppliers to produce work-arounds to most potential conflicts - so please ring for advice if you have (or suspect you will have) compatibility problems between any of your A1200 peripherals. In most cases we will be able to advise you how to get around the problem.

EZBus-Z4 - A new Zorro adapter is now available from Eyetech featuring regular Z2 slots and 2x 19MB/s local bus connectors:

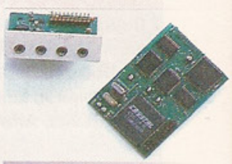
Zorro-4 adapter alone	£149.95
Introductory price for first 100 orders - just	£129.95
Scandoubler/flickerfixer/video adapter	£29.95
24-bit local-slot graphics card	£T.B.A.

COMPREHENSIVE FITTING KITS FOR EXPANDED A1200s NOW SHIPPED WITH TOWER VERSIONS OF THE PRELUDE1200s

The response to the UK launch of the Prelude 1200 by Eyetech has been overwhelming. Although originally designed for A1200 desktop console fitting, it was soon obvious that many Prelude 1200 purchasers wanted to fit their new cards into towered-up A1200s - many already highly expanded.



Two popular accessories in particular - the Elbox IDE Flyer (also sold under the Power Flyer and Winner Flyer names) and the BVision card from Phase 5 - both intrude on the A1200' clock port connector's real estate - preventing the Prelude1200 from being correctly positioned. To overcome this problem we have had some Prelude 1200s specially manufactured with ribbon cable headers (instead of clock port sockets). Eyetech is supplying these complete with clock port ribbon cable and board fixings so that the Prelude 1200 can be suitably positioned so that it and IDE Flyer/BVision can co-exist. In addition, we have had brackets specially manufactured which allow the Prelude1200 card's input/output connectors to be fitted into a standard card frame slot on any Amiga tower. These brackets, pin-header Prelude1200 boards and ribbon cable are now included as standard with the tower version of the Prelude1200 - part reference INT-AUD-PL12-TW - costing £144.95.



For users of A1200's without Bvision or IDE-Flyers who have access to the unused blanking plate next to the mouse port (ie not towered or in an Eyetech EZTower) the direct clock port fitting Prelude 1200 - (part INT-AUD-PL12-DT) is available at just £129.95.

BMON - A FAMILY OF MONITOR SWITCHES FOR THE BVISION, CYBERVISION & OTHER GRAPHICS CARDS

Following the release of the BVision in late December 1998, Eyetech has completely redesigned its BMon range of high quality video switches to cater not just for the BVision, but for all Amiga graphics cards and scandoubler/flickerfixer combinations.

The BMon takes two video inputs - one from an Amiga's AA chipset (either directly or via a scandoubler/flickerfixer) and the other from a graphics card (BVision, Cybervision, Picasso, Ateo bus card etc) - and switches your SVGA or multisync monitor between them.

The BMon uses high quality video switchers so - unlike conventional switchboxes - there is no loss of quality from either source. It can also be used - in its SMon form - for switching an SVGA monitor between a PC and Amiga system.

As standard the BMon accepts input from a BVision or Cybervision card and from an Eyetech EZVGA internal flickerfixer-2. It is manually switched by a remote miniature toggle switch positioned - for example - on the front panel of a tower system. An optional automatic switch controller is currently under development and can be easily added later.

The BMon comes in a self-contained plastic case (approx 55x50x15mm) and attaches to the back of the case using Velco strips. It can easily be mounted inside a tower system using any available 15pin 'D' type knock-out on the tower's rear panel.

The BMon is available in six different configurations to suit most graphics card/Amiga video configurations as follows:

AMIGA CHIPSET CONNECTION		23pin D-M RGB	15pin HD-F SVGA	EZVGA INFF-2
GRAPHICS	BVision, CyberVisionPPC	ADPT-VGA-BMON/A	ADPT-VGA-BMON/V	ADPT-VGA-BMON/F
CARD TYPE:	Ateo, Picasso, PC gfx card etc	ADPT-VGA-SMON/A	ADPT-VGA-SMON/V	ADPT-VGA-SMON/F

The BMon, complete with manual change-over switch & indicator and EZVGA INFF-2 connecting lead (ie part number ADPT-VGA-BMON/F) is priced at just £39.95. Please see the price list on page 4 of this advert for other prices.

A1200 EZTower systems, EZPC Tower systems, Magic Packs and accessories

NEW EZPC A1200 TOWER EXPANSION CONFIGURATIONS

3 new pre-configured systems to suit different applications and pockets

The EZPC system works by making the PC motherboard act as a slave processor to your A1200 - looking after the operation of the systems accessories whilst you and your Amiga get on with creative work. (You can of course use the PC as a computer in its own right if you really insist!)

It's also important to understand that EZPC A1200 expansion system is based on a real Amiga and is not at all comparable with other PC-only systems running a clever, but slow, Amiga emulator as a PC application.

In fact there are such a range of applications that the EZPC system can open up to an Amiga user that we have introduced three systems pre-configured for different types of use. These are:

A1200 EZ-PC TOWER-HSE (Home Studio Edition). £999.95

The HSE configuration comes complete with TV tuner with cut-and-paste teletext facilities, 24-bit video frame grabber and video clip capture card, 30 bit colour scanner, 56K modem and unlimited internet access at local call rates - as well as the standard EZPC system components

A1200 EZPC TOWER-DVE (Digital Video Edition). £1369.95

The DVE is fitted with a purpose-designed, hardware-based MJPEG non-linear video editing suite for home/semi-professional video production. It also comes with built-in CD Writer/ReWriter (with drag-and-drop CD writing software) for producing your own audio and video CDs.

A1200 EZPC TOWER-XLS. £1995.95

This must be the ultimate creative multimedia expansion platform for your A1200. It comes equipped with non-linear video editing hardware and software, A4 30-bit flatbed scanner, DVD ROM hardware & MPEG 2 decoder (for DVD video playback), CD ReWritable drive, 15" Colour Monitor, 56k data/fax/voice modem with voicemail and internet software - and much more.

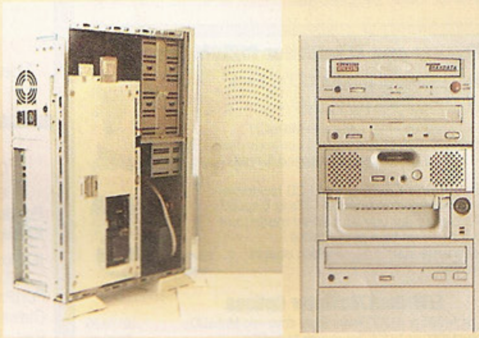
A1200 EZPC TOWER-3.1+. £395.95

Finally, if your A1200 is feeling a bit tired we can supply your chosen EZPC Tower system with a brand new Kickstart 3.1 A1200, complete with Magic Pack software, 24 Speed CDROM, 2.1 GB hard drive (with W/b & Magic Pack software preinstalled), EZCD Mk4 interface and EZIDE software ready installed and connected up. All you need to do is to slot in your existing accelerator, fit your old hard drive into the external mounting drawer provided (see photo) switch on and start using your new A1200 EZPC Tower system.

All these three packs are designed for you to fit your existing A1200 in the EZPC Tower and connect it up. This normally takes around an hour, but if you would prefer to receive your system ready to use, we can arrange to collect your Amiga, do the work for you and ship your new system back all ready to plug-in to mains and phone outlets! Please ring for details.

EZPC-Tower Model	HSE	DVE	XLS
EZPC-Tower/250W psu/PC mouse/HD floppy	Yes	Yes	Yes
EZ-Key k/b adapter PC k/b & rem switch	Yes	Yes	Yes
Ultra DMA hard drive 4.2GB	Yes	Yes	Yes
DVD-ROM(inc 20xCDROM)/CDROM	32x CDROM	32x CDROM	DVD-ROM
CDReWriter(inc 6xCDROM) & s/w	n/a	Yes	Yes
10 x blank CDR's 650MB	n/a	Yes	Yes
100Mhz bus PC m'board w/64MB	Yes	Yes	Yes
High perf high res 3D Gfx card w/MPEG-1	Yes	Yes	Yes
TV/teletext/framegrabber	Yes	n/a	n/a
Hardware MJPEG Video Editor	n/a	Yes	Yes
Hardware MPEG-2 Video decoder	n/a	+£59.95	Yes
CD-quality sound card with MIDI	Yes	Yes	Yes
Software controlled Amiga/PC audio mixer	Yes	Yes	Yes
Internal 60W PMPO monitor speakers	Yes	Yes	Yes
Siamese RTG2.5 software	Yes	Yes	Yes
Amiga PCMCIA & PC ethernet cards/cabs	Yes	Yes	Yes
30-bit high res A4 flatbed scanner	Yes	+£59.95	Yes
Internal 56k data/fax/voice modem	Yes	+£99.95	Yes
Unlimited access Internet package	Yes	inc w/above	+£49.95
15" SVGA monitor	+£109.95	+£109.95	Yes
17" SVGA monitor	+£199.95	+£199.95	+£99.95
Win 9.x/Lotus Smartsuite bundle	+£99.95	+£99.95	Yes
Miami Amiga TCP/IP stack	+£24.95	+£24.95	Yes
75%-off Cinema-4D/PC voucher	Yes	Yes	Yes
Cost with options as specified	£999.95	£1369.95	£1999.95





The EZPC Tower system showing the A1200, the PC rear sockets and card slots and removable side panels

AMIGA 1200 Magic Packs

Direct to Eyetech from Amiga International Inc.



Full UK specification with Kickstart 3.1/Workbench 3.1 disks and manuals. UK PSU, mousemat, TV lead and 2mb graphics memory (in addition to any memory expansion included in the packs below). Fantastic software bundle including Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz. Hard drive versions come with Scala MM300 pre-installed. Other options available, eg EZ-Tower Magic Pack bundles from £299.95 - ring for details. Time-of-purchase upgrade packages available at very special prices - see asterisked* items in the 'Pack' boxes below.

Eyetech Starter Pack & Starter Pack-Plus

Diskette based system as above — Just £179.95
CDROM-ready, 170MB HD system as above — Just £248.95
(New! HD pack now includes EZCD buffered i/f and ext'l CDROM socket)
Upgrade HD system to a 24-speed CDPlus unit with PSU for just £59.95

Eyetech Productivity Pack 3

170MB HD,030/33MHz/MMU/FPU/8MB — Just £299.95
(New! HD pack now includes EZCD buffered i/f and ext'l CDROM socket)
Upg to an '040/25MHz/MMU/FPU w/16MB & 100W PSU for just £99.95*
&/or upgrade to an EZTower-Plus with EZKey & PC k/b for just £110.00*

Eyetech MiniTower Pack 3

2.2GB HD, '040/28MHz CPG/MMU/FPU/16MB, 24-speed CDROM, EZ-CD-Mk4 4-device buffered i/f & cables, EZIDE s/w, MiniTower case with 230W PSU — Just £598.95
Upgrade to an '040/40-SE/MMU/FPU with 32MB for just £69.95*

Eyetech Professional Pack 3

4.3GB HD, '040/40-SE/MMU/FPU/32MB, 24-speed CDROM, EZCD-Mk4 4-device buffered i/f & cables, EZIDE software, EZTower case, Amiga k/b & i/f, 250W PSU — Just £798.95
Upgrade to a 160MHz PPC & '040/25MHz/MMU/FPU w/64MB for £129.95*
... &/or add a 14" Monitor & Scandoubler for just £129.95*

The New Eyetech Mk 4 EZTower System - from just £79.95 - or £99.95 including keyboard & keyboard interface

Thinking of towering up your A1200? Then you should certainly be considering the unique Eyetech EZTower System

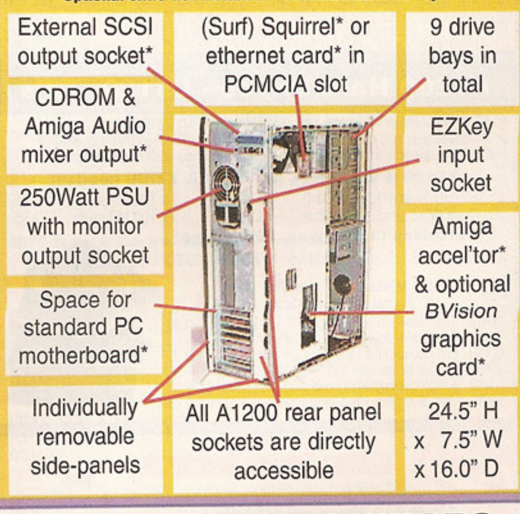
"This is definitely one of the easiest solutions to building your own Tower" - *Amiga Format*
"The Eyetech Tower offers clever solutions with a Velcro easyfit mentality" - *CU Amiga*

- ✔ The easiest way to re-house your A1200 by far
- ✔ Expand your system with EZPC or Zorro slots
- ✔ 250 W PSU with PC and Amiga power connectors
- ✔ Available in 5 models to suit different skills and budgets
- ✔ The only tower allowing both PC & A1200 in one case

	Backplate kit	DIY* EZTower	Full EZTower
DFO: face plate & ribbon cable	Yes	Yes	Yes
Custom backpanel w/SCSI, audio KOs	Yes	Yes	Yes
A1200 power & LED adptrs	Yes	Yes	Yes
CE-approved metal PC case	n/a	Yes	Yes
No of bays/PSU capacity	n/a	9/250W	9/250W
Directly accessible PCMCIA slot	Yes	Yes	Yes
DIY assembly instructions	Yes	Yes	n/a
Installation instructions	Yes	Yes	Yes
PC board/Siamese compatibility	Yes	Yes	Yes
Assembled & A1200-ready	No	No	Yes
Eyetech installation option	No	No	Yes
Cost with options as specified	£39.95	£79.95	£99.95
With EZKey2/PC k/b (w/A4k k/b+£20)	n/a	£99.95	£119.95

*With the DIY EZ-Tower you have to remove the PC tower back panel and some internal shelving and fix the new back panel in place

* Optional extra not included in standard EZTower system



AMIGA SVGA MONITORS

For use with Amiga Zorro & the new PPC Graphics Cards, Scandoublers & the EZPC-Tower system



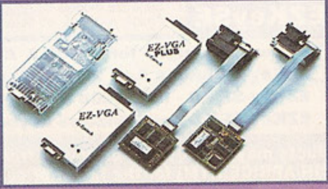
- ✔ All monitors come with a 3-year warranty.
- ✔ Special pricing on scandoublers/flickerfixers bought with monitors from just £45 extra
- ✔ Monitor specifications are quoted as the highest vertical refresh rate at the maximum resolution. Higher refresh rates (>=72Hz) at lower resolutions are available and give a more visually relaxing display.
- ✔ Scandoubler/flickerfixers have resolutions governed by the Amiga's AA/AGA chipset and are restricted to a maximum vertical refresh of 73Hz and a maximum usable resolution of 724Hx566V.
- ✔ The PPC BVision supports 1600x1280@72Hz. You will not gain the full benefit of this superb graphics card without a monitor that supports this resolution at that refresh rate.

14" SVGA 0.28DP, 1024Hx768V @ 60Hz £89.95
15" SVGA 0.28DP, 1024Hx768V @ 60Hz £119.95
17" SVGA 0.28DP, 1280Hx1024V @ 60Hz £209.95
17" SVGA 0.26DP, 1600Hx1280V @ 75Hz £399.95

EZVGA Scandoublers & Flickerfixers from just £48.95

All scandoublers/flickerfixers allow the Amigas 15Khz modes to display on a PC SVGA monitor. Flickerfixers allow interlaced screens to be displayed, rock-steady, at twice the standard vertical resolution. Other modes are passed through unaltered.

EZVGA-Mk2	Compact, external, upgradable scandoubler (to full flickerfixer)	£69.95
EZVGA-Plus	Compact, external scandoubler with full flickerfixer	£99.95
EZVGA-SEFF	Economy external scandoubler with full flickerfixer	£89.95
EZVGA-INSD	Internal A1200/A4000 scandoubler (not upgradeable)	£48.95
EZVGA-INFF	Internal A1200/A4000 scandoubler with full flickerfixer	£79.95



Peripherals & Storage

AWARD-WINNING UMAX SCSI FLATBED SCANNER



- ✔ 600 x 300dpi optical resolution, single-pass 24-bit A4 flatbed scanner
- ✔ Comes with Photoscope (Amiga) and Mac software. Compatible with all modern SCSI interfaces - including PPC, Blizzard & Classic Squirrel (but not Surf-Squirrel)
- ✔ PCW 'Best Scanner of 1998' Award - July 1998; PCW 'Best Scanner' September 1998
- ✔ Highly-acclaimed ArtEffect-SE v1.5 (normally £59.95) free with this bundle whilst stocks last . . . .

Amiga UMAX Scanner & PhotoScope Bundle now with FREE ArtEffect-SE v1.5 - still just £179.95

The Top-Rated CD-Plus Range for the A1200

"Eyetech have come up with a real winner with this new CDROM drive" - Ben Vost, AF

If your A1200 hasn't got a CDROM then you don't know what you're missing!

At these prices there is really no excuse!



- ✔ Whisper quiet 24 or 32-speed CDROM mechanism
- ✔ EZCD-Mk4 4-device buffered interface, 3-connector 40-way and 2-connector 44-way cables included
- ✔ CDPlus driver software specially written for Eyetech by the author of IDE-fix
- ✔ Optional Amiga and CDDA audio mixer with Gold phono audio jacks - just £14.95 each
- ✔ 20-watt CE-approved PSU complete with 13A plug.
- ✔ Optional upgrade to MiniTower or Desktop case with 230W PSU (which can also hold extra drives and power your Amiga) just £20 extra!
- ✔ 2 Free CDs whilst stocks last

Complete CDPlus Systems: 24-speed just £74.95; 32-speed just £84.95!
Bare mechanisms for tower: 24-speed just £39.95; 32-speed just £44.95!

A1200 EZWriter and EZReWriter CDROM Burners

Make your own music and data CD's, back up data for less than 0.15p/MB . . .



- ✔ Both are IDE/ATAPI reader/writer units with MakeCD Amiga writing software
- ✔ EZWriter units cut 'Gold' CD blanks at 2x speed & read CDROM's at 8 speed
- ✔ EZReWriter units cut 'Gold' CD blanks and CD rewritable disks at 2x speed and read conventional CD's at 6 speed
- ✔ Gold 650MB CD blanks (for use with either model) are available at ten for £10 at time of purchase
- ✔ CD rewritable disks are just £5 each when bought with the EZReWriter



EZWriter Internal

EZWriter/EZReWriter Options

EZWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£179.95
EZWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£209.95
EZWriter-SE	External A1200 unit with separate 100w PSU	£249.95
EZWriter-Gold	External A1200 unit with int 40w PSU, Gold Audio skts	£279.95
EZWriter-MT	Mini-Tower-cased unit with 230w PSU which can house an additional LS120/Zip/CDROM & power your A1200	£269.95
EZReWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£199.95
EZReWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£229.95
EZReWriter-SE	External A1200 CD ReWriter with separate 100w PSU	£279.95
IDE interfaces	EZCD-SE I/F, 44-way & 40-way cables & CDROM s/w -	add £20
if required . . .	EZCD-Mk4 I/F, 44 & 40-way cables & EZ-IDE s/w -	add £30
	IDE-Flyer or IDE-Express I/F, cables & s/w -	add £50

A1200 Hard Drives - LS120, ZIPs

- ✔ All drives come ready to use with WB3.0 pre-installed & WB2.x install script
- ✔ All drives over 200 MB come with over 45 top quality utilities (not shovelware) and MMe multimedia authoring s/w pre-installed, configured & ready-to-run

LS120 & Zip Drives (ATAPI i/f & EZIDE needed)

LS120 (HD Floppy/120MB Cart) -	£79.95	3 x 120MB carts	£29.95
Zip Drive (Mac emul. compatible) -	£79.95	3 x 100 MB carts	£29.95

TowerDrives (3.5" drives, 25mm high)

2.1GB - £89.95 3.2GB - £109.95 4.3GB - £129.95



2.5" InstantDrives for the A600/A1200/SX32

20MB	Entry-level drive for the SX32/A600	£29.95
170MB	Entry-level drive for the SX32Pro/A1200	£49.95
260MB	Entry-level drive for the SX32Pro/A1200	£59.95
720MB	A drive for serious A1200/SX32 Pro users	£99.95
1.4GB	A high performance drive for power users	£129.95
3.2GB	Ultra slim 9mm drive for A1200/600/SX32	£179.95

EZGen Amiga Genlock

lower price

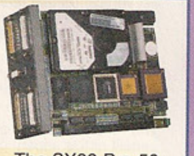


- ✔ Superimposes Amiga-generated graphics on a composite PAL video stream. Just plug in and go!
- ✔ Substitutes incoming video for any 'transparent' colours in your paint package, titling or multimedia presentation software.
- ✔ Create stunning transition and titling effects with packages such as Scala MM300 (which is included with A1200 hard drive Magic Packs).

Now just £69.95

Turn your CD32 into an A1200!

- ◆ All models come with keyboard, hard & floppy drive, serial, parallel, RGB & VGA video interfaces
- ◆ Pro models have '030 40MHz or 50MHz cpu and optional PC keyboard i/f. Pro-50 has full MMU.
- ◆ Mk2 takes up to 8MB & FPU; Pro models take up to 64MB & FPU.



The SX32 Pro-50

SX32 Mk2	£149.95		
SX32 Pro50	£249.95	SX32 Pro40EC	£199.95

Accelerators & Interfaces

Apollo Accelerators for the A1200

NEW

1230/40 TURBO PRO MK3



High performance 1 or 2 simm entry level accelerators for A1200 desktop consoles or Tower systems
with MMU, FPU & 1 SIMM socket only £59.95
with MMU, FPU & 2 SIMM sockets only £69.95

A1240/28	'040/28MHz/MMU/FPU*	(21 MIPS)	£127.95
A1240/40SE	'040/40MHz/MMU/FPU*	(30 MIPS)	£167.95
A1240/40	'040/40MHz/MMU/FPU*	(30 MIPS)	£184.95
A1260/50	'060/50MHz/MMU/FPU*	(39 MIPS)	£264.95
A1260/66	'060/66MHz/MMU/FPU*	(51 MIPS)	£349.95

The Apollo A1260/66 is the fastest Operating System-supported Amiga accelerator currently available

Tip: Buy your memory with the accelerator to ensure full compatibility

20% off memory prices when bought with an Apollo or phase5 accelerator

phase5 PowerUp A1200 PPC + '040/'060 Accelerators

Without SCSI (not upgradable) inc. MMU & FPU

160 MHz 603e PPC	'040/25/MMU.FPU	only £199.95
160 MHz 603e PPC	'060/50/MMU/FPU	only £479.95
240 MHz 603e PPC	'040/25/MMU/FPU	only £319.95
240 MHz 603e PPC	'060/50/MMU/FPU	only £549.95



Add £69 to the above prices for factory fitted on-board Fast SCSI II interface

Blizzard Vision PPC 8MB Graphics Card

Unbelievable quality and speed - 1600x1280@72HZ!
No Zorro slots needed!

NEW! 8mb card - £159.95 or just £139.95 with a PPC

The fastest, most highly specified graphics card you can buy for your A1200

A1200 Clock Port Expansion Cards

For non-Zorro expansion A1200 owners the best expansion route is via the (unused) clock port

PortJunior	1x 460kb serial port	39.95
IOBlix1200S	1x 1.5 MB/s serial port	49.95
IOBlix1200P	1x EPP parallel port (Drivers for PC parallel port scanners, Zip drives etc., available shortly)	49.95
PortPlus	2x460kb ser & 1x800kb par port	69.95
Catweasel-2	HD Amiga/PC floppy controller	49.95
Prelude1200-DT	16-bit f/d sound card for desktop A1200	129.95
Prelude1200-TW	16-bit f/d sound card for tower A1200	149.95
ClockUp	4-way clock port expander	19.95

New IOBLIX expandable Z2 I/O card for tower systems 2 x S + 1 x P for £89.95

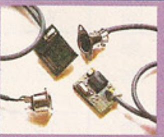
Complete A1200 IDE solutions . .

Abridged Guide to Buffered Interfaces

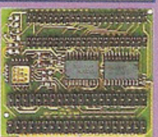
A buffered IDE interface is essential if you are considering expanding your A1200's storage capability. Not only does it give you the option to attach up to 4 hard drive/CDROM/LS120/Zip etc devices but it also protects your A1200 by putting back the buffering electronics that Commodore/AI left out of the A1200 design. Some interfaces can also significantly speed up the data transfer to and from your hard drive and/or CDROM ... but you will need to choose the right interface for your particular setup - see below, ring for details or send a stamped addressed envelope for an IDE Interface Fact Sheet. Note that the EZCD-SE is equivalent to the 'standard' interface offered by some other suppliers. See also the EZIDE software panel on this page.

Interface	Max Xfer	Suitability
EZCD-SE	2MB/s	68030/40Mhz or slower / no accelerator.
EZCD-Mk4	3MB/s	68030/50, 68040/xx, 68060/xx accelerator.
IDE-Express	5MB/s	040/xx, 060/xx, UDMA HD & 24 speed+CDROM
IDE-Flyer	8MB/s	040/xx, 060/xx, UDMA HD & 24 speed+CDROM

EZCD Buffered Interfaces	SE	Mk4
4-Device Buff Interface & CDROM Software	£18.95	£28.95
CDROM s/w, 3x40 & 2x44-way cables	£28.95	£38.95
EZ-IDE s/w, 3x40 & 2x44-way cables	£38.95	£48.95
Elbox IDE Flyer I/F& CDROM file system (>4.3GB HD Support)		£54.95
IDE Express Interface & IDE-fix Express Software		£49.95







EZKey2

- ✔ Autodetects and remaps Amiga & PC keyboards
- ✔ Plugs directly into the ribbon cable slot on the A1200

EZKey2 alone - for A1200 only - just	£28.95
EZKey2 and Windows keyboard	£38.95
EZKey2, A4000 k/b & 6-to-5 pin adapter	£58.95

EZKeySE

- ✔ Separate models for Amiga & PC keyboards
- ✔ Amiga version & k/b detects all multi-key combinations

EZKey-SE/Amiga - for A1200 & A600 - just	£18.95
EZKey-SE/Amiga A4K k/b & 6-5 pin adapter	£48.95
EZKey-SE/PC - for A1200 & A600 - just	£24.95
EZKey-SE/PC and Windows keyboard	£34.95

Due to variations in exchange rates the prices of some products may change - up or down - from the prices shown. Please ring or check our website [www.eyetech.co.uk/MAIN/APRICE.HTM] for the latest prices before ordering.

Software & Drivers

TurboPrint 7 - The essential partner for your digital imaging work

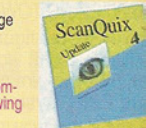


- ✔ The most comprehensive, fastest replacement printing system for all WB2.x+ Amigas
- ✔ Supports more than 70 printers including the latest models from Epson, Canon, HP printers - including the Award-winning Epson Stylus Photo series
- ✔ Integrates seamlessly with ScanQuix scanning software and CamControl digital camera software
- ✔ Poster printing, image tiling, colour correction, print spooling, multiple copies, postscript emulator, screen grabber, photo optimisation etc, all included
- ✔ Selectable parallel device for use with high-speed interfaces such as the PortPlus & IOBlix1200P
- ✔ 20% off the price of the the PortPlus & IOBlix1200P when purchased with TurboPrint.

TB7 - £38
6 to 7 u/g - £1

Amiga Digital Imaging Software from Andreas Gunther

ScanQuix4 Software just £59.95 - Upgrades just £29.95



- ✔ 24 bit scanning with full range of editing options.
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XLPaint, Pagestream 3, DPaint5) via AREXX.
- ✔ 'Scan-to-disk' option in Jpeg or IFF.
- ✔ Unique calibration program which automatically compensates for scanner and printer deficiencies allowing photo-realistic output on any high resolution, Turboprint or StudioII supported, colour printer.
- ✔ Interpolated resolutions to 20000x20000 dpi.
- ✔ Colour photocopy option when used with a one-pass colour scanner
- ✔ Supports Epson, HP, Umax, and some Mustek & Artek SCSI scanners & Epson parallel scanners.(Umax ScanQuix4 is £69.95, Photoscope £59.95
- ✔ Compatible with all modern SCSI controllers including PPC, Blizzard & Classic Squirrel (but not Surf-Squirrel).

CamControl Amiga Digital Camera Software - now just £29.95



- ✔ Serial connection versions available for most popular models of Kodak, Minolta, Olympus, Casio & Fuji digital cameras
- ✔ Picture transfer, camera control & sideshow options (camera dependent)
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XL Paint, Pagestream 3, DPaint 5) via AREXX
- ✔ Selectable serial device for use with high-speed interfaces like the PortJun IOBlix1200S
- ✔ 20% off the price of the PortPlus & IOBlix1200S when purchased w CamControl software.

EZIDE - IDE/ATAPI enhancement software

Probably the only hard drive/CDROM/LS120/Zip/SyQuest software you'll ever need

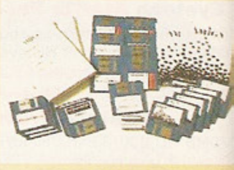
- ✔ Supports LS120, Zip, Jaz, SyQuest, and other IDE/ATAPI removable tridge drives AUTOMATICALLY. Cartridges just appear on the Workbench when inserted and disappear when ejected - just like a fl py disk. IDE ZipPrep tools are also included.
- ✔ Optimises hard disk performance automatically. Supports 'second cha nel' hard drives on most 4-device buffered interfaces.
- ✔ Extensive CDROM support including multidisk changers, CD32 emulation, high performance Mac, PC & Amiga CDROM filesystems, multisession and multivolume CDROM support.

EZ-IDE Amiga IDE, ATAPI, CDROM & removable media driver s/w	£34.
If bought with any EZCD, I/F, Zip or LS120 Drive	£9.
Upgrade from Eyetech CDPlus/IDE Fix software*	£14.

(*trade in & proof of purchase required)

Amiga Magic Upgrade Packs available in limited quantities

The ideal way to update your Commodore A1200:



- ◆ 3.1 Kickstart ROMs
- ◆ Photogenics 1.2SE
- ◆ 3.1 Workbench (6 disks)
- ◆ Personal Paint 6.4
- ◆ Wordworth 4.5 SE
- ◆ Organiser 1.1
- ◆ Turbocalc 3.5
- ◆ Pinball Mania & Whizz
- ◆ Datastore 1.1
- ◆ Workbench 3.1 manuals
- ◆ Magic Pack application software manuals . . . . .

. . . . all for just **£49.95!**

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Tel: 07000 4 AMIGA ~ 07000 4 26442 ~ +44(0)1642 713 185 Fax: 44(0)1642 713 6
Net: sales, info @eyetech.co.uk. www.eyetech.co.uk.

UK Bank/BS Cheques, Visa*, Mastercard*, Switch, Delta, Connect, Solo, Electro Postal/Money orders accepted. (*A 3% charge applies to all credit card orders). Due to spa limitations some of the specs given are indicative only - please ring/write for further detai Please check prices, specification and availability before ordering. **If ordering by pos please provide a daytime telephone number. Goods are not sup plied on a trial basis**. A1200 items are tested with a Rev 1.D.1 motherboard - oth boards may need modification. E.&O.E. All prices include VAT at 17.5%. Orders sent outsi the EC do not incur VAT - divide the prices shown by 1.175 to arrive at ex-VAT prices.

UK Next Day Insured Delivery Charges: Software/Cables, EZCD I/F = £3.00 2.5" Drives, Accelerators, Manuals = £7.00, 3.5" Drives, FDDs, PSUs, SX32 = £9.00, CDPlus, Minitower, Desktop = £11.00, EZTW & EZPC = £15.00. Worldwide in 2-7 days from receipt of faxed order & payment details.

EYETECH

EYETECH AMIGA PARTS & PRICE INDEX APRIL 1999 TEL: +44 (0)1642-713-185 - 07000 4 AMIGA

rfaces and Adapters: EZ-Key & DIY Tower Components

EZK2	Mk 2 Amiga/PC k/b -> A1200 kbd direct connect	28.95
EZK2-A4K	A1200 EZKey MK2/6p -> 5p adptr/A4000 kbd bdle	58.95
EZK2-W95	Mk2 Amiga/PC k/b->A1200 rib cab+Win95 kbd	38.95
EZSE-A	EZKey-SE Amiga 5p DIN k/b adapter for A1200/A600	18.95
EZSE-A/K	EZKey-SE Amiga + 6p->5p adptr + A4000 kbd bundle	48.95
EZKSE-P	EZKey-SE PC 5p DIN k/b adapter for A1200/A600	24.95
EZKSE-P/K	EZKey-SE PC k/b adapter for A1200/A600 + Win95 kbd	34.95
HD-2/3	2.5"/44way -> 3.5"/40w+4w & mtg bracket	11.95
HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
BD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
DF0-FP	Tower faceplate adapter for A1200 int FD	4.95

rfaces and Adapters: A1200 Ethernet, SCSI

PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	69.95

& Adapters: Flickerfixers, Genlocks, Video Digitisers
Adapters, Monitor Switches, Monitor Leads

VGA-BV8M	BVision 8MB gfx card for A1200 (needs PPC)	159.95
VGA-BMON/F	SVGA Monitor Switcher - BVisn/CVisn & EZVGA INFF2	39.95
VGA-BMON/V	SVGA Monitor Switcher - BVisn/CVisn &15pHD In/Ex SD/FF	44.95
VGA-BMON/A	M/Sync Monitor Switcher - BVisn/CVisn & 23p RGB socket	44.95
VGA-SMON/F	SVGA MonSw - Ateo/Picasso 15pHD Gfx & EZVGA INFF2	49.95
VGA-SMON/V	SVGA MonSw - Ateo/Pic'o 15pHD & 15pHD In/Ex SD/FF	49.95
VGA-SMON/A	M/Sync MonSw- Ateo/Pic'o 15pHD & 23p RGB socket	54.95
VGA-AMON	Auto Amiga/CV64-3D m/sync monitor switch	39.95
VGA-M2SD	EZ-VGA-Mk2 external s/doubler PLL u/gradable	69.95
VGA-PLFF	EZ-VGA-Plus external flickerfixer 23F-15F PLL	99.95
VGA-SDUG	SDBL2 to SD-flickerfixer u/g	40.00
VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgrad'le	48.95
VGA-INFF	EZ-VGA- internal A1200 flickerfixer	79.95
VGA-INFF2	EZ-VGA- internal A1200 flickerfixer for use with BMON	89.95
VGA-SEFF	EZ-VGA-SE flickerfixer 23F-15M Xtal	89.95
GA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
GA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
GA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
GA-UNBF	Amiga 23pD-F ->15pHD-F VGA adapter	12.95
GA-BUF	Amiga 23pD-F ->15pHD-F buffered adapter	16.95
PGB-24RT	ProGrab 24-RT Amiga parallel port video digitiser (no PSU)	94.95
PGB-PSU	PSU for ProGrab 24RT	9.95
GLK-COMP	EZ-Gen composite video Genlock for A1200	69.95

rfaces and Adapters: A1200 Sound cards & software

AUD-PL12-DT	Prelude1200 for A1200 DT console only	129.95
AUD-PL12-TW	Prelude1200 for Tower w/ribbon cble/audio I/O brkt, CD i/f	144.95
AUD-PL12-UG	Upgrade node from PL12-DT to PL12-TW	19.95
AUD-PLZ2	Prelude ZorroII 16-bit full duplex sound card	189.95
SMP-OP	Samplitude Opus 16 channel, virtual projects, FFT filtering	149.95
SMP-LE	Samplitude-LE 4 channel , virtual projects, FFT filtering	49.95

& Adapters - IDE/ATAPI & software

IDE-FLYR	Elbox 4-dev 32 bit high perf buf'd A1200 IDE i/f	54.95
FLR-SPC-SP	ROM spacers for Elbox IDE-Flyer purchased w/ IDE-FLYR	4.95
FLR-SPC	ROM spacers for Elbox IDE-Flyer purchased elsewhere	8.95
EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CDROM s/w	28.95
EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	38.95
EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44 cabs, EZIDE	48.95
EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CDROM s/w	18.95
EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	28.95
EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
EZIDE-CU	P/x upgrade to EZIDE from competitive product	14.95
EZIDE-SP	EIDE/ATAPI enhancer/CDROM Software Bundle Price	9.95

& Adapters - Serial, Parallel, Floppy & Clock port expanders

SER-PTJR	PortJunior - 460KB serial i/f for A1200	39.95
IOBL-S12	IOBlix 12S - 1.5Mbps serial i/f for A1200	49.95
IOBL-P12	IOBlix 12P - EPP parallel port i/f for A1200	49.95
SER-PTPL	PortPlus - 2x 460KB ser + 1x 800KB par i/f for A1200	79.95
IOBL-Z2	IOBlix Z2 - 4x1.5Mbpsser + 1x EPP par port ZorroII	89.95
IOBL-Z2PX	1x EPP par port expan for INT-IOBL-Z2 (to 4xs+2xP)	19.95
CLK-EXP	ClockUp 4-way clock port expander for A1200	19.95
FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95

bles & Cable Adapters: Audio & Mains

AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F 'Y' mixer lead 1.8m	6.95
AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter 'Y' mixer	2.50
AUD-RCA-G	RCA(phono)-M ->2xRCA-F gold plated adapt 'Y' mixer	3.50
IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.95
IEC-4X13	AC powerstrip 1xIEC-M -> 4x13A-F mains skt	14.95
PLUG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

bles & Cable Adapters: Serial, Modem, SCSI, Printer

SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m	7.95
SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m	6.95
SER-NUL2M	Null modem cable w/ D9F & D25F at each end 2m	9.95
SER-NUL5M	Null modem cable w/ D9F & D25F at each end 5m	14.95
SER-NUL10M	Null modem cable w/ D9F & D25F at each end 10m	19.95
SER-25F9M	25p-F to 9pM serial RS232 adapter	4.95
SER-25M9F	25p-M to 9pF serial RS232 adapter	4.95
SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
SCS-25D/50C	SCSI cable DB25-M -> Cent50-M 1m	9.95
SCS-25D/25D	SCSI cable DB25M-DB25M mac type 1m	9.95
SCS-50C/50C	SCSI cable Centr50M->Centr50M 1m	9.95
SCS-50H/50C	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC	19.95
SCS-50H/25D	SCSI-2 cable 50h/pDM->25D-M 1m for PPC	19.95
PAR-FULL	Bidirectional printer cable all pins connected	9.95

bles & Cable Adapters: VGA, Keyboard, Switchboxes, Cables, Scart
bles (See also BMON, SMON autoswitches above)

SW-S/K	Dual monitor & k/b switchbox	14.95
SW-S/K/M	Dual monitor, k/b & mouse switchbox	19.95
KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m	9.95
VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m	9.95
SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio	12.95

bles: HD, CDROM, Floppy, Clock Port Data & A1200 HD Power

PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200 30cm	9.95
PD-2F	Power splitter floppy drive to hard drive + floppy	9.95
PD-30C	44->40way 3.5" HD data & pwr cabs - A1200	14.95
HD-KIT	A1200 full 3.5" hard drive fitting kit	24.95
22-2W-9C	22way-F x2 A1200 clock port cable 9cm o/a	5.00
34-2W-50C	34way-F x2 FDD ribbon cable for tower 50cm	9.95
40-2W-20C	40 way IDE cable 2 connector 20cm	5.00
CAB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len	9.95
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a	9.95
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 connector, 13cm o/a	9.95
CAB44-2W-60C	44way (2.5" HD) cable 2 connector, 60cm o/a	19.95
CAB44-3W-12C	44way (2.5" HD) cable 3 connector, 12cm o/a	12.95
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 connector,24cm o/a	14.95
CAB50-CUST	Custom cable 3x50way IDC SCSI + 1xCent50-F 60cm	19.95

Cables: HD, CDROM, Floppy Power Splitters - Tower Systems

CABPW-1W-1F	Power converter cab HD-M -> FD-F	4.95
CABPW-2W-1H1F	HD/FD power splitter HD-M->1xHD-F/1xFD-F	6.95
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F	6.95
CABPW-2W-2H	HD/CD power splitter 4p-M ->2x 4p-F 15cm	6.95
CABPW-3W-2H1F	HD/FD power splitter HD-M->2xHD-F/1xFD-F	8.95
CABPW-3W-3H	HD power splitter HD-M -> 3xHD-F	8.95
CAB-HD-PWXTN	4p-M -> 4p-F HD/CD power cab ext 90cm	9.95
CAB-HD-FD/4	23p-M-floppy -> 4p-F HD/CD power 90cm	9.95

New - ISDN Term Adapters, 56k Modems & Net Access Bundles

NET-ISP	One time setup/support/unlimited usage/no ongoing net access charge (0845 call charges only) with 25MB web space, 10 email addresses, 90 days free net support.	49.95
NET-EYE-1	128Kbps ISDN T/A + NET-ISP as above	179.95
NET-EYE-2	128K ISDN T/A, PortJnr i/f + NET-ISP as above	209.95
NET-EYE-3	128K ISDN T/A, NetConnect2 s/w + NET-ISP	219.95
NET-EYE-4	128K ISDN T/A, PtJn, NetConnect2 s/w + NET-ISP	249.95
NET-EYE-5	56Kb fax/voice modem + NET-ISP as above	99.95
NET-EYE-6	56Kb fax/voice modem, PortJnr i/f + NET-ISP as above	129.95
NET-EYE-7	56Kb fax/voice mdm, NetConnect2 s/w + NET-ISP	139.95
NET-EYE-8	56Kb fax/voice mdm, PtJn, NetConnect2 + NET-ISP	169.95
NET-REF	Internet Ref Book by D Winder	2.00
NET-NC2	Netconnect 2.2 s/w	49.95
MOD-56K	56K Voice/Data/Fax Modem External inc serial cable	69.95
MOD-ISDN	128K External ISDN terminal adapter inc serial cable	139.95

lower prices

CDROM Systems including EZ-Tower & MT/DT Bundles

CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w	74.95
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	84.95
CD-DT/MT-24X	CDPlus Desktop/Minitower 24 x with CDROM s/w	94.95
CD-DT/MT-32X	CDPlus Desktop/Minitower 32 x with CDROM s/w	104.95
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixr/adapter	14.95
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm	6.00
CAB40-DDC	A1200 IDE skt adptr 40F-40M with mtgs 15cm	9.95
CD24-BARE	Bare 24 speed CDROM mechanism for twr/A4k	39.95
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism for twr/A4k	44.95

CDWriter/ReWriter Systems inc. EZ-Tower & MT/DT Bundles

CDR-BARE-2X8	EZWriter Mechanism (no MakeCD)	179.95
CDR-IN-2x8	EZWriter 2/8x with MakeCD for A4000,Tower	209.95
CDR-SE-2x8	EZWriter-SE external 2/8x with MakeCD	249.95
CDR-DT/MT-2x8	EZWriter Desktop/Minitower 2/8 speed with MakeCD	269.95
CDR-PL-2x8	EZWriter-Gold external 2/8x with MakeCD	279.95
CDRW-BARE-226	EZReWriter Mechanism (no MakeCD)	199.95
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	239.95
CDRW-SE-226	EZReWriter-SE external 2x2x6 w/MakeCD	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	299.95
CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
CDR-CDM4-UG	EZCDMk4+40+44way cabs + EZIDE s/w w/CDR	30.00
CDR-CDFL-UG	IDE-Flyer high-speed IDE i/f, s/w, cabs purch w/CDR	50.00
CDR-CDXP-UG	IDE-Express high-speed IDE i/f, s/w, cabs pur w/CDR	45.00
CDR-DSK-10	Recordable CD media (WORM) 650MB x10	14.95
CDR-DSK-10-SP	Recordable CD media 650MBx10 pur w/EZWriter	10.00
CDRW-DSK	Single CDrewritable disk 650MB	9.95
CDRW-DSK-SP	Single CDrewritable disk 650MB pur w/EZReWriter	5.00
DVR-MCD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95

EZTowerZ4 Systems, Z4 busboard expansions

CASE-DTZ4	DIY EZTower-Z4 250W PSU, LED adpt, FD cab/fp	89.95
CASE-DTZ4-PL	DIY EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	109.95
CASE-DTZ4-PLZ4	DIY EZTwr-Z4, EZKey, PC kbd, FD cab/fp Z4 slots	239.95
CASE-DTZ4-PLZ4-S	DIY EZTwr-Z4 & Z4 adapter as above until April 1999	199.95
CASE-RTZ4	Ready-to-Use EZTwr-Z4 250W PSU, LED adpt, FD cab/fp	109.95
CASE-RTZ4-PL	RTU EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	129.95
CASE-RTZ4-PLZ4	RTU EZTwr-Z4 250W, PC kbd/adpt, FD cab/fp, Z4 slots	259.95
CASE-RTZ4-PLZ4-S	RTU EZTwr-Z4 & Z4 adapter as above until April 1999	219.95
ADPT-Z4	Z4 adapter for A1200 5xZ2, 2xZ2, 2xclock ports	149.95
ADPT-Z4-SP	Z4 adapter as above lst 100 orders	129.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00

EZTower Systems, MiniTower/Desktop Cases & Accessories

CASE-FT-DIY	EZTwr Mk4 kit w/250W, FD cab/fp, bkpl for self conv'n	79.95
CASE-FT-DIY-PLUS	EZTower kit w/250W PSU, EZKey, PC kbd, FD cab/fp	99.95
CASE-FT-RTU	Ready-built EZTower 250W PSU, LED adpt, FD cab/fp	99.95
CASE-FT-RTU-PLUS	Ready-built EZTwr w/250W, EZKey, PC kbd, FD cab/fp	119.95
CASE-DT	Desktop case with 200W+ psu for HD/CDROM	29.95
CASE-MT	MiniTower case wth 200W+ psu for HD/CDROM	29.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00
CASE-FT-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
ADPT-AUD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	14.95
ADPT-SCSI-EZTW	EZTwr SCSI adpt 30cm 2xCent50F, 1xIDC50F	14.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95
CAB-SER-SSQ	9pDM->9pDF SurfSq EZTwr ser extn cab 50cm	9.95

SVGA Monitors - require Scandoubler and/or Flickerfix to use all Amiga modes

MON-14-.28	14" dig SVGA 0.28DP 1024x768@60Hz	89.95
MON-15-.28	15" dig SVGA 0.28DP 1024x768@60Hz	119.95
MON-17-.28	17" dig SVGA 0.28DP 1280x1024@60Hz	209.95
MON-17-.26	17" dig SVGA 135MHz, 0.26DP 1600x1280@75Hz	399.95
ADPT-MON-SEFF	EZVGA-SE ext flickerfixer purch w/ monitor	85.00
ADPT-MON-M2SD	EZVGA-Mk2 ext s/dblr u/g'able purch w/ monitor	65.00
ADPT-MON-PLFF	EZVGA-Plus ext flickerfixer purch w/ monitor	90.00
ADPT-MON-INSD	EZ-VGA internal s/doubler purch w/ monitor	45.00
ADPT-MON-INFF	EZ-VGA internal f/fixer purch w/ monitor	75.00
ADPT-MON-INFF2	EZ-VGA internal f/fixer purch w/ monitor for BMON	85.00

Digital Cameras and Amiga Digital Camera Software

DVR-CAM-CAS	CamControl s/w for Casio QV10/100/300/700	29.95
DVR-CAM-FUJ	CamControl s/w for Fuji DS5/DS7 /DX7/DX9	29.95
DVR-CAM-KOD	CamControl s/w for Kodak DC20/DC25	29.95
DVR-CAM-MIN	CamControl s/w for Minolta Dimage V	29.95
DVR-CAM-OLY	CamControl s/w for Olympus 420L/820L/1000L/1400L	29.95
INT-12I-PTJR-SP	PortJnr hi-speed ser i/f pur with CamControl s/w	30.00

Amiga Printer Software/Drivers

DVR-ENPR	EnPrint. Amiga printer driver for pre-03/97 Epson Printers	9.95
DVR-TBPR7	TurboPrint 7.x Amiga printer driver (English)	38.95
DVR-TB6/7-UG	TurboPrint 6.x to 7.x upgrade (Send TB6 disk w/order)	19.95

Amiga Image Conversion/Effects Software, Scanner Software, Scanner Bundles and Adapters

SCN-FBA4-BDL3	UMAX award-winning SCSI A4FB scanner with PScope	179.95
	---------- Free ArtEffect-SE v1.5 with above whilst stocks last ----------	
DVR-SQ4	ScanQuix4 + 1 driver (Epson/HP/Artec/Mustek)	59.95
DVR-SQ4-U	ScanQuix4 + 1 driver (UMAX)	74.95
DVR-SQ4-UG	ScanQuix3 to SQ4 upgrade (trade-in & receipt reqd)	29.95
DVR-PHS	PhotoScope UMAX-SCSI Amiga Scanner Driver	59.95
CAB-SCS-25D/50C-S	SCSI cable DB25-M -> Cent50-M 1m pur w/scnr	5.00
CAB-SCS-25D/25D-S	SCSI cable DB25M-DB25M mac type pur w/scnr	5.00
CAB-SCS-50C/50C-S	SCSI cable Centr50M->Centr50M 1m pur w/scnr	5.00
CAB-SCS-50H/50C-S	SCSI-2 cable 50h/pDM->Cent50M 1m for PPC pur w/scnr	10.00
CAB-SCS-50H/25D-S	SCSI-2 cable 50h/pDM->25D-M 1m for PPC pur w/scnr	10.00
ADPT-SCS-CSQR-SP	Classic Squirrel PCMCIA SCSI i/f 50pCM pur w/scnr	54.95
ACC-SCS-BLM4-SP	SCSI/SIMM socket for Blizzard 1230/50/MK4 purchased w/scanner	59.95
ADPT-SCS-50/50CF-SP	Centronics 50p-F to Centronics 50p-F (SQ) pur w/scnr	7.50
ADPT-SQ3-PAR	SQ3 adapter Epson scanner ->parallel port cable	9.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Hard & Floppy Drive, CDROM, LS120 & Zip Mech. & Cases

FDD-ITL-1200	Replacement A1200/600 int FDD 880KB	24.95
FDD-ITL-BARE	Bare 1.44/880 Sony FDD for tower (needs EZDF0/Catwsl)	19.95
FDD-ITL-D/C/I	Twr int 880Kb FDD(Sony/EZDF0/cab bundle)	29.95
FDD-ITL-D/I	Twr intl 880Kb FDD (Sony/EZDF0) No cable	24.95
HD2-21	21MB 2.5" hard drive 90 days warranty	29.95
HD2-170	170MB 2.5" hard drive	49.95
HD2-260	260MB 2.5" hard drive	54.95
HD2-1.4	1.4GB 2.5" hard drive for Amiga	129.95
HD2-3.2	3.2GB Ultra Slim drive 2.5" 9mm high	179.95
HD3-2.5	2.5GB 1"x3.5" IDE drive for tower	94.95
HD3-3.2	3.2GB 1"x3.5" IDE drive for tower	179.95
HD3-4.3	4.3GB 1"x3.5" IDE drive for tower	129.95
HD3-LS120	Panasonic LS120 floppy/optical 1.4/120MB	79.95
HD3-LS120-CT1	Single 120 MB cartridge for LS120 drive	14.95
HD3-LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
HD3-ZIP-CT1	Single 100MB (nominal) Zip cartridge	14.95
HD3-ZIP-CT3	3-Pack of 100MB (nominal) Zip cartridges	29.95
HD3-ZIP-IDE	Bare ATAPI/IDE Zip drive internal	79.95
CAB44-CD-13C	44way (2.5" HD) cable sold with CD/HD 13cm	6.00
CASE-ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
CASE-HD-ECON	External 3.5" HD case no psu	19.95
CASE-HD-REM	Removable drive case for 3.5" HD (metal) no psu	24.95

Keyboards, Mice, PSU's, Misc. Hardware

FAN-60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.95
KBD-A1000	A1000 keyboard with 6-pin mini-Din cntr*	39.95
KBD-A1200	Replacement A1200 k/b w/ribbon cable*	24.95
KBD-A4000	A4000 keyboard with 6-pin mini-DIN plug*	34.95
KBD-WIN95	Windows 95 keyboard with 5-pin AT DIN plug*	12.95
MOU-WHI	Amiga mouse - white/cream -with mousemat*	6.95
PSU-100	100w PSU for Amiga (fit your old lead - inc instrns,cntrs)	29.95
PSU-200	200w PSU for Amiga (fit your old lead - inc instrns,cntrs)	39.95
PSU-230	200/250w replacement PSU for MT/DT/FT	29.95
PSU-A1200	A1200 23W PSU (original) 90 days warranty	19.95
SPK-16W	16W PMPO speakers w/ PSU 3.5mm jack, AC mains PSU	10.95
SPK-60W-INT	5.25" Bay Internal mounting 60W PMPO speakers/amp	24.95

(* NB items subject to mechanical wear & tear are limited to 90 days warranty on those components)

Accelerators: PowerPC with 680x0 Co-processor

ADPT-VGA-BV8M-SP	BVision 8MB A1200 gfx card pur w/ PPC acc	139.95
ACC-PPC-16-4025	Bliz'd PPC603/160MHz+040/25/FPU/ no SCSI	199.95
ACC-PPC-16-6050	Bliz'd PPC603/160MHz+060/50/FPU no SCSI	479.95
ACC-PPC-24-4025	Bliz'd PPC603/240MHz+040/25/FPU no SCSI	319.95
ACC-PPC-24-6050	Bliz'd PPC603/240MHz+060/50/FPU no SCSI	549.95
ACC-PPC-16S-4025	Bliz'd PPC603/160MHz+040/25/FPU/SCSI-2	268.95
ACC-PPC-16S-6050	Bliz'd PPC603/160MHz+060/50/FPU/SCSI-2	548.95
ACC-PPC-24S-4025	Bliz'd PPC603/240MHz+040/25/FPU/SCSI-2	388.95
ACC-PPC-24S-6050	Bliz'rd PPC603/240MHz+060/50/FPU/SCSI-2	618.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95

Accelerators: Apollo 680xx

ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	359.95
ACC-060-50	Apollo '060 MMU/FPU 50MHz A1200 acc (lim avail)	267.95
ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	184.95
ACC-040-40-SE	Apollo '040 MMU/FPU 40MHz A1200 accel (20% o/c)	164.95
ACC-040-28	Apollo '040 MMU/FPU 28MHz A1200 accel	124.95
ACC-030-40-1S	Apollo '030 MMU/FPU 40MHz A1200 accel 1 simm skt	59.95
ACC-030-40-2S	Apollo '030 MMU/FPU 40MHz 2 simm skt	69.95
ACC-4/60-SSKT	Apollo 1240/60 2nd simm socket & fitting	20.00

Memory: Simms, Zip RAM & FPU's - Please ring for latest prices

MEM-32MB-72P	72 pin 32 MB 32 bit simm for Amiga (+£10 for single sided)	39.95
MEM-16MB-72P	72 pin 16MB 32 bit simm for Amiga	29.95
MEM-8MB-72P	72 pin 8MB 32 bit simm for Amiga	19.95
MEM-4MB-72P	72 pin 4MB 32 bit simm 70 ns	12.95

WB Disks, Kickstart ROMS, Manuals etc

SYS-WB30-DSK	Amiga WB3.0 disksx5 + Eyetech HD install	9.95
SYS-WB31-DSK	Amiga Workbench 3.1 disks x6 (w/ HD inst)	14.95
SYS-KS31-ROM	A1200 Kickstart 3.1 ROM chips (2 chips)	29.95
SYS-KS31-SET	A1200 K/s 3.1 ROMs & WB3.1 dskx6 (no manuals)	36.95
SYS-KS31-MPUG	A1200 Mag Pk u/g 3.1ROMs,WB3.1,appln s/w, manuals	49.95

EZPC-Tower & Siamese Systems & Components

EZPC-HSE-CF1	EZPC SiSys system Home Studio Edition	999.95
EZPC-DVE-CF1	EZPC SiSys system Digital Video Edition	1369.95
EZPC-XLS-CF1	EZPC SiSys system - the ultimate Amiga expansion	1999.95
EZPC-AMP-CF1	A1200 Magic Pack/24x/3.2GB/etc EZPC-Tower upgrade	399.95
PSW-W9X/SS	Windows 9x & Lotus SmartSuite bundle	99.95
SYS-SIA-ETH	Siamese System2.5 w/PC, Amiga ethernet	189.95
SYS-SIA-R25	Siamese System software RTG v2.5	99.95
SYS-SIA-R21	Siamese serial s/w RTG v2.1 (ref'ble agnst v2.5)	19.95
SYS-TCP-MIA	Miami TCP/IP stack for Amiga (reg'n fee paid)	24.95

CD32, SX32 & Accessories

ADPT-KBD-SX32P	SX32 Pro PC k/b adapter cable 10cm	9.95
CD32-JOY	CD32/SX32 joypad	9.95
CD32-PAL	CD32 console with 18Wpsu/joypad/RF lead	149.95
SX32-MK2	SX32 Mk2 Ram/Clock/FPU expander for CD32	149.95
SX32-P40EC	SX32 Pro 030EC/40MHz Acc/Ram/Clk/FPU to 64MB	199.95
SX32-P50	SX32 Pro 030/50MHz Acc/Ram/Clk/FPU to 64MB	249.95

A1200 Magic Packs, Accessories and Upgrade Bundles

AMP-STR-FDD	A1200 Starter Magic pack FDD vers /w s/w	179.95
AMP-STR-HD2	A1200 Starter Magic pack w/170 HD, EZCD i/f, skt & s/w	248.95
AMP-MCD-PK3	Amiga M P 24xCD/2.5GB/'040-28/16MB/MT	598.95
AMP-PDV-PK3	A1200 Mgk pk 170MB/'030-33/8MB	328.95
AMP-PDV-EZT	A1200 Mgk pk 170MB/'030-33/8MB & EZTW+	448.95
AMP-PRO-PK3	A12 EZTwr Pro2 '040-40/32MB/4.3/PCkb/20xCD	798.95
AMU-STH2-CDUG	24 x CDROM upgrade for AMP-STR-HD2 w/PSU	59.95
AMU-MCD-4040/32	040/40/MMU/FPU/32MB u/g w/MCD-PK3	69.95
AMU-PDV-4025/16	040/25/MMU/FPU/16MB +100w ug w/PDV-PK3	99.95
AMU-PRO-HAB/64	160PPC,040/40/MMU/FPU/64MB ug w/PRO-PK3	129.95
AMU-PRO-MONSD	Int Scandoubler + 14" Digital Monitor ug w/PRO-PK3	129.95
AMU-PRO-LS120	LS120 120/1.44/0.72MB drive ug w/PRO-PK3	74.95

Tools, Test Equipment, Motherboards & Workshop Services

ACC-4/60-SSKT	Apollo 1240/60 2nd simm socket & fitting	20.00
PT-MBD-1200	Replacement A1200 motherboard (no ROMs)	129.95
PT-EXT-PLCC	PLCC extractor tool for 33Mhz FPU	9.95
PT-ATM-9	9-range analogue test meter V, I, R, battery tests	9.95
PT-DTM-14	14-range digital test meter V, I, R, battery, diode tests	12.95
FIT-EZ-MAIN	A1200 to EZ-Tower fitting - A1200 + 1 drive	30.00
FIT-EZ-XTRA	Fitting/testing per customer-supplied periph into EZtwr	7.50
REP-AM-2B/1D4	A1200 motherboard rev 2B or 1D4 manufacturing fault fix	30.00



THE AUTHOR

Ted Wallingford is the webmaster at Pantheon Systems, the company that produces the Amiga Inc. website. He has a wide range of experience with Amiga, PC and Unix-based systems.

Amiga Networking

Ted Wallingford gets you connected in the first of a special two part feature.

Part 1

An Amiga is a really great thing, like the director of a band whose players are applications and data files. When connected to a network, your band becomes an orchestra. When your Amiga is connected, you can share files, printers, modems and other resources with other computers on the network. Since there's a plethora of network options available for the Amiga you should be able to easily orchestrate any networking symphony you want.

THE TCP/IP NETWORK

Every great symphony is performed by an orchestra with many players. All of these players must somehow be in communication with one another about the tempo and movements of the symphony. The musicians use sheet music to keep their thoughts and musical motions aligned and in sync.

> "The Amiga can use all sorts of network hardware products due to its Standard Amiga Network Architecture 2..."

Amigas use TCP/IP, a common networking protocol, to keep their data transmissions in sync. With TCP/IP, the Amiga can establish connections to other computers for transferring files, requesting documents and printing. TCP/IP enables your Amiga to communicate with other computers, just as sheet music enables the composer of the symphony to communicate with the musicians in the orchestra.

Though the Amiga OS doesn't support TCP/IP out of the box, a number of excellent TCP/IP software products can connect your Amiga to a network. Any Amiga with OS 2.04 or later and at least 2Mb RAM can be networked using TCP/IP, though each TCP/IP product has specific technical requirements. TCP/IP stands for "Transport Control Protocol/Internet Protocol" because it's the networking protocol which is exclusively used on the Internet.

WHAT'S WHAT?

Local Area Network .... Two or more computers connected together for the sake of communicating with each other.
Ethernet .... The most commonly used technology for connecting computers on local area networks.
Gateway .... A computer which shares its unique position on the network with other computers. For example, a computer with a modem connected to the Internet, sharing its connection with others.
Web Server .... A computer that stores and retrieves web pages for a web browser.
File Server .... A computer which allows multiple computers and users to share files.
Router .... A computer which transmits data between networks, such as a local area network and the Internet.
Print Server .... A computer which spools and prints documents sent to it by other computers on its printer.

By far the most popular Amiga TCP/IP software, Nordic Global's *Miami*, allows the Amiga to connect to the Internet or a local area network quickly and easily. *Miami* includes a *MUI* configuration interface and *MiamiInit*, which is a great tool for connecting to your Internet Service Provider using a modem.



***Miami* is just one of the choices of TCP stacks you have if you want to network your Amiga.**

Active Technologies' *Genesis* offers advanced options like *I-Net 225* and is at least as friendly as *Miami*. *Genesis* offers access control features, too. If it's being used to allow kids to browse the Internet, a parent or teacher can grant and deny access to each user at certain times, for certain applications like web browsing. *Genesis* also gives you a built-in cost logger so you can keep track of the time you spend connected to the Internet. For a complete suite of Internet applications, Active also offer the *NetConnect* package which includes programs for email, file transfer and web browsing.

Interworks' *I-Net 225*, a mature TCP/IP networking software package, offers extensive configuration options for security, user accounts and routing. *I-Net* 225 pays for this functionality as it's quite tricky to use. Beginners will definitely want to stick to *Miami*.

HiSoft offer another TCP/IP option called *TermiteTCP* from the now-defunct Oregon Research. *TermiteTCP* is very friendly, but it's incompatible with several important Internet applications.

PPP, PLIP AND SLIP

Once you've chosen a TCP/IP package you've got to orchestrate a physical network connection. The Amiga can use all sorts of network hardware products due to its Standard Amiga Network Architecture 2 (SANA-II) device driver system. SANA-II provides a way for the TCP/IP software to communicate through network hardware. Any network hardware that includes a SANA-II driver should work with any SANA-II-compliant TCP/IP package. All of the packages in Symphony No. 1 are SANA-II-compliant.

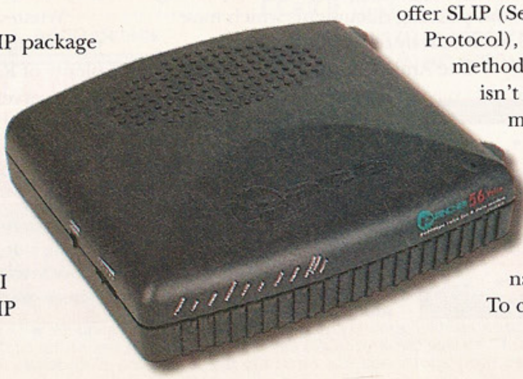
Just as the oboe player in the orchestra must use his fingers and mouth to express the composer's musical ideas on his instrument, the network interface hardware allows your Amiga to express TCP/IP messages to other computers connected to the network. The network interface hardware can be a modem, a parallel cable or an Ethernet card.

PROS AND CONS

There are merits and drawbacks to each kind of network interface. For example, modems offer a cheap way to connect your Amiga to the Internet but they're relatively slow. Parallel cables are faster but only allow a single, direct connection to another computer. Ethernet cards are more expensive but offer very high speed to as many computers as are connected to the network and also using Ethernet.

A fast modem like US Robotics' Sportster 33.6K (and 56K) model is fine for web browsing and email, but it's probably a poor choice for networked video games like *Quake* or for transferring large files from another computer. A decent modem should cost about £60. When configuring your TCP/IP software to use the modem, you'll need to choose one of two SANA-II device drivers.

PPP (point-to-point protocol) is the most commonly used method of establishing modem communications on the Internet or on a wide-area network. *Miami*, *I-Net 225* and *Genesis* all include ppp.device, the SANA-II device driver for PPP.



A modem is essential if you're going to use your Amiga on the net.

A few Internet Service Providers offer SLIP (Serial Line Interface Protocol), an older, alternative method for modems. SLIP isn't as well supported by most Amiga TCP/IP packages so it's best to choose PPP instead. However, if you must use C/SLIP, *Genesis* natively supports it.

To connect an Amiga directly to another computer system, a parallel cable will work. Since a parallel cable is much faster than a modem, it's better for transferring large files between your Amiga and another computer. The networking protocol for parallel connections is called PLIP (Parallel Line Interface Protocol).

If you have two Amigas running *I-Net 225* and one of them is connected to the Internet, you can share the Internet connection with the Amiga on the other end of the parallel cable. This is accomplished through routing, which is very easy to set up with *I-Net 225*.

PLIP can also be used to share a Linux or BSD computer's Internet access with an Amiga. PLIP device drivers are readily available for both operating systems. Instructions on setting up PLIP for Linux are available from http://www.linux.org.

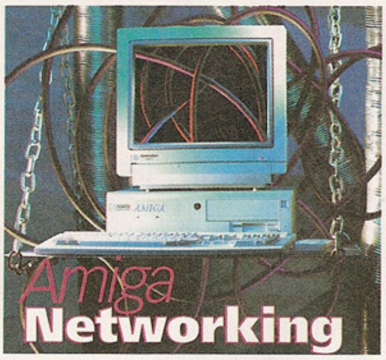
If you don't have a second Amiga or a Linux/BSD machine, sharing Internet access with a Macintosh or Windows computer is possible using a null-modem cable instead of a parallel cable. If your Internet computer is a Macintosh, extending its Internet connection to your Amiga is made possible through gateway software products like VicomTech's *Internet Gateway*. If your Internet computer is a PC running Windows95 or 98, CoreSystems' *InternetConnect* will allow your Amiga to share access.

ETHERNET

The most capable type of network interface hardware is an Ethernet card. Ethernet is a network topology that connects computers using stranded cable or BNC coaxial cable. Ethernet cards are available for all Amigas except the CDTV, CD^{32} and Amiga 1000. With Ethernet your Amiga can transmit data to other machines on the network at speeds hundreds of times faster than a standard modem. Your Amiga can also share other computers' Internet access using Ethernet, as long as your Internet computer also has an Ethernet card.

Think of Ethernet as an advanced pianist with dozens of years of experience, whereas a parallel line or modem seems more like a six-year-old child just beginning piano lessons. If you were building an orchestra, which piano player would you choose – the

Continued overleaf ➡



expert or the beginner? Ethernet is the worldwide standard for local area networking. SANA-II device drivers for Ethernet cards are provided by their manufacturers. Current production Amigas, the A1200 and the A4000, as well as the A500, A600, A2000 and A3000 lines, can both use Ethernet cards with any of the TCP/IP networking packages.

Ethernet cards come in two varieties: Zorro II/III and PCMCIA. Zorro II/III cards fit into the card slots on the main board of the A2000, A3000 and A4000. PCMCIA cards sit in the side-slot of the A600 and A1200. For the A500, a Zorro-II Ethernet card can be used with some modifications to the left-side expansion bus slot.

While beginners probably won't want to spend the cash (about £100) on an Ethernet card if they only intend to connect to the Internet, it's well worth it if you're looking for really fast data transfers or network gaming.

For the A1200 and A600, National Amiga offer the AP/NET PCMCIA Ethernet card for about £80. Haage and Partner offer the Netax1200, a comparable PCMCIA solution, for about £90.



Ethernet cards are the accepted way of linking your Amiga to a Local Area Network (LAN).

For the A2000, A3000 and A4000, several Ethernet cards are available. Hydra Systems' Amiganet card is a traditional favourite at about £120 and is available from Interworks. Village Tronic offer their Ariadne II ethernet card for about £90. Its predecessor, the Ariadne, may be available second-hand. It offers two extra parallel ports, which may be beneficial if you're going to share your Amiga's Ethernet connection with other Amigas using parallel cables.

A LOADED AMIGA SERVER

Want to add a little spice to your Amiga networking masterpiece? Put an Amiga server on your network. Amigas can be used as web servers, file servers, routers, and print servers. The first movement of the Amiga Server piece is a TCP/IP package. *I-Net 225* is easily the most qualified server TCP/IP package. Besides being very fast, *I-Net 225* can be used as an Internet gateway for other computers on your local area network.

The second movement of the Amiga Server piece is a server program, or daemon. If you want to make your Amiga a web server, you'll need a web server daemon such as *Apache* (available from http://www.apache.org).

> If you want to make your Amiga a web server, you'll need a web server daemon such as Apache...

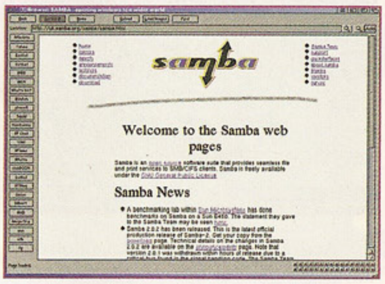
With ARexx, the Amiga's built-in scripting language, you can make your programs talk to your website. For example, you could connect a graphics program like *ImageFX* to *Apache* in order to generate on-the-fly modifications of a web surfer's graphics files. You could connect a database program like *Fiasco* to your website in order to create an online store. Of course, if you like the scripting language *Perl* (http://www.perl.com) better than ARexx, you can use that too, but not to communicate with Amiga programs.

If your Amiga's fate is that of a printer server, *I-Net 225* includes *Line Printer Daemon*, a program for spooling and printing documents which have been sent by other computers.

The Amiga can also be used as a file server for Windows and Macintosh computers, using the file server daemon *Samba* (http://www.samba.org). This daemon communicates with Windows and Macintosh network clients, just like a Windows server. Other Amiga computers can also share files on the Amiga server if they're running the *Samba* network client.



Use *Apache* to turn your Amiga into a web server.



SMB **is a protocol used by W95 for linking machines. You can use it on the Amiga too.**

LINUX

While all this can be done on the Amiga OS, M68K Linux provides a more effective crescendo for web servers, file servers and print servers. M68K Linux is the Amiga implementation of the immensely popular, freely-distributable, Unix-like operating system.

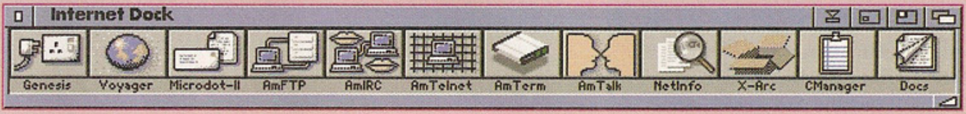
Since Linux has virtual memory and a more robust multiple-user environment than *I-Net 225* on Amiga OS, it's much more suited to the task of a server.

Linux's TCP/IP support is built-in so you won't have to purchase a separate TCP/IP package. It's available for the Amiga from Schatzruhe on CD-ROM and from Red Hat Software on their Rough Cuts CD-ROM.

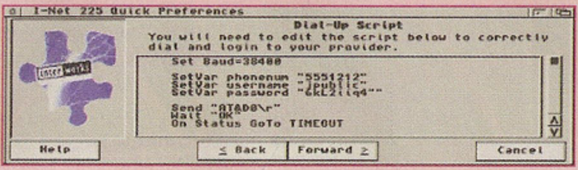
Whatever destiny you choose for your Amiga server, be sure you have plenty of RAM and hard disk space. The more server daemons you run, the more RAM you'll need.

HOW TO GET YOUR AMIGA ONLINE

1. Get a modem; the faster the better.
2. Set up an Internet access account with an Internet Service Provider in your area.
3. Connect the modem to your Amiga's serial port. For extra speed on the A1200, use a PCMCIA serial accelerator like HiSoft's Whippet instead.
4. Install your TCP/IP software, either *Miami*, *I-Net 225*, *NetConnect* or *Genesis*.
5. To set up your Internet account information with *Miami* use *MiamiInit*; with *I-Net 225* use *QuickPrefs*; with *NetConnect* and *Genesis* use the *Setup Wizard*.
6. Start surfing!



NetConnect's toolbar allows you to quickly launch its Internet applications or start your network connection.



QuickPrefs allows users of *I-Net 225* to set up their Internet or Local Area Network connections quickly and easily.

NEXT MONTH

We'll cover the Windows, Mac and Linux side, and show how to link your now Internet-ready Amiga to any of these machines.

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Cuckoo '99



Frustrated by its sad lack of Internet, ARexx, SCSI, ATAPI and AHI compatibility, **Don Swimigoon** brings cuckoo clocks into the fourth month of 1999 with a boing!

We all remember the cuckoo clock, the staple product of Swiss industry. Once an hour, and at intervals in between, it celebrated the passage of time by firing an ersatz bird out of a hatch, with appropriate sound effects. Cute, but hardly state of the art.

After extensive research and experimentation, *Amiga Format* can present the Amiga-friendly, ARexx-compatible, retargetable SCSI or ATAPI equivalent. Unhang your heads, dear readers, as we show you how to add another unforgettable trick to the Amiga's repertoire...

> *"Cuckoo99 does all this and more. It turns a humble SCSI or ATAPI Amiga into a state of the art animated timepiece."*

IMPROVEMENTS

The old-model cuckoo clock is amusing, but it's about time it worked in stereo. In fact, 16-bit, CD-quality AHI sound seems overdue. And that wind-up mechanism is a bit of an anachronism. You'd have thought they could do it

AFCD38:-In_the_Mag-/Cuckoo99

GOODIES ON THE CD

ON THIS MONTH'S CD

Cuckoo99 **ARexx scripts for SCSI and ATAPI drives (configurable for your device and unit number);** ***SCSIutil*** **for low-level communication;** ***SynClock*** **atomic time synchroniser; a dozen sample sounds including authentic cuckoos, roosters, sheep, dogs, bizarre effects and guest sounds from the world of TV and video; a Paula stereo sound player, plus** ***Play16*** **for CD and DAT quality AHI compatibility!**

CUCKOO99 FEATURES

- Custom sounds and real-world motile feedback.
- ARexx interface for total user-configurability.
- Internet-interactive atomic clock synchronisation option.
- Retargetable Paula, Maestro and AHI sound effects.
- Compatible with SCSI 1 or 2 and ATAPI removable drives.
- Synchronised multi-tasking for very low CPU overhead.
- Guaranteed to be fully millennium compliant.

automatically by now, ideally with something flexible like a SCSI 2 or ATAPI interface, a battery-backed clock at the very least, and preferably including some sort of atomic clock Internet connection.

> A CD drive gives that exciting real-world animation as the tray grinds back and forth in time with the cuckoo chimes.

Cuckoo99 does all this and more. It turns a humble SCSI or ATAPI Amiga into a state of the art animated timepiece. When you've finished half-timbering your custom tower, maybe stone-cladding it if you've had to get a mortgage to finish the job, this is just the thing to make your Amiga the talking point of any sophisticated gathering. What's more, you've probably got all the bits already.

At a minimum, you'll need an Amiga running ARexx. A hardware clock or Internet connection and synchronisation script removes the need to set the time after powering up. A SCSI or ATAPI CD drive with a motorised tray gives that exciting real-world animation as the tray grinds impressively back and forth in time with the cuckoo chimes.

Unfortunately, it doesn't work with Zip disks, DAT tapes or caddy CD drives yet as they can eject media but lack the mechanism to draw them back into the computer. Don's wrestling with a robot arm to solve this problem.

Sound effects can be broadcast through the Amiga's built-in Paula sample player, or your AHI-compatible sound card if you're lucky enough to own one. A dozen interesting sample sounds are on the *AFCD* and there are thousands more in the Public Domain. You could even configure *Cuckoo99* to play a MIDI sequence or MP3, given appropriate hardware and a Shell command to trigger replay.

Graphics are also possible, from a simple DisplayBeep to a pop-up screen or animation, if you really don't care about getting any work done.

CONCUSSION

Give thanks, for only the Amiga makes it possible. Whether it's desirable is for you to decide. If you get really, really keen on this hack you could potentially wear out your CD tray mechanism. If this worries you, stick with sampled sound or get a scrap drive where the tray works but the laser has gone doolally, a plentiful and cheap resource at computer fairs and radio rallies, and dedicate one port on your SCSI or IDE expander to the dynamic cuckoo simulation. Remember, very loud noises may cause fright or ear damage. If in doubt, don't. See you next April!

Cuckoo Clock 1.06 for Paula + CyberSCSI unit 1

```
ADDRESS COMMAND
PARSE ARG DEVICE UNIT /* Get device specifications */
IF LENGTH(DEVICE)=0 THEN DO
DEVICE="cybscsi.device"
UNIT=1
END
DEVICE=INSERT("-d",DEVICE)

DO FOREVER
PARSE VALUE TIME() WITH hours ':' minutes ':' seconds
IF minutes=0 THEN DO
IF hours>12 THEN hours=hours-12
IF hours=0 THEN hours=12
CALL BONG hours
END /* Start of a new hour */
IF minutes=15 | minutes=30 | minutes=45 THEN DO
CALL BONG 1 /* SAY "Quarter Bong at" TIME() */
END /* Half or quarter past the hour */
IF seconds>0 THEN DO
DELAY=60-seconds /* Wait till next minute */
'WAIT ' DELAY ' SECS'
END
WAIT 1 SEC /* Make sure minutes have changed */
END

/* Payload routine, uses SCSIUTIL and SOUND */
BONG:
ARG chimes
'SCSIUTIL' DEVICE UNIT '-e 0' /* Tray out */
DO FOR chimes
'SOUND' 'sounds/cuckoo.8svx'
END
'SCSIUTIL' DEVICE UNIT '-e 1' /* Tray in */
RETURN
```

CUCKOO CONFIGURATION

The heart of *Cuckoo99* is an ARexx script which monitors the Amiga clock to determine when to work its magic. ARexx is ideal for this job, with its powerful string handling and conversion routines, and you can plug just about any Shell command into the listing to perform your favourite action or combo sequence when the chime time comes.

Joking apart, for this is hardly the most serious tutorial we've featured, the script shows how you can slice the time into ARexx variables and trigger events periodically, varying them depending on the exact time. This is the job of the main program, which you start with the command RX Cuckoo.rexx or by clicking on the *Cuckoo99* ICONX script icon. You need to have *RexxMast* running – most people put it in their WBstartup drawer to save having to click on the icon in their SYS: partition to enable ARexx scripts.

The 'payload' is the routine called BONG, passing a value to indicate the number of chimes. The drive tray animation is achieved with *SCSIutil* and the -e option, which can eject or reload the media in drives with an appropriate mechanism. This also works with ATAPI-compatible drives as they implement the same SCSI command set. Just substitute your drive's device name and unit number as parameters of the RX command or defaults in the script.

The Sound command plays mono or stereo samples through the Amiga's audio.device. It works with files in the standard IFF 8SVX format and can play stereo or mono files through the left or right channel. Documentation and source code are on the CD. *Play16* is the grown-up equivalent, on the CD in +System+/Tools as usual. It supports samples in WAV, VOC, MAUD, AIFF, Sun and NeXT encoding, raw 8-, 14- and 16-bit samples in log and linear formats, AHI sound cards and MaestroPro digital audio, as well as the normal Amiga Paula chip and 8SVX files. *Play16* can also squeeze 14-bit samples through Paula, using either AHI or CyberSound calibrated output routines.

TROUBLESHOOTING

A quick way to test the configuration is to add the line CALL BONG 13 near the start of the ARexx script, before the DO FOREVER line. This should open the drive, chime 13 times and close again. You'll see error messages if you've failed to put the commands where they're accessible to the Shell – *SOUND* and *SCSIutil* need to be on the path, typically in the C: directory. The command routines complain if you've got the sample file path, device name or unit wrong. If you can't wait to see it working, use SYS:Prefs/Time to provoke the cuckoo into action by setting the system clock a minute or two ahead of the top of the hour.

If you want to experiment with the *Cuckoo99* source, you might consider some enhancements. It could perform the tray animation for each chime, rather than before and after the sound effects. You might want it to skip the tray effect when there's a CD in the drive (INFO CD0: reports 'No disk present' if that drive is empty) preventing a flurry of 'Please insert disk' messages at regular intervals.

CUCKOO.REXX might implement a curfew to keep it quiet through the morning hours. Special sounds could be selected on your birthday by parsing the current DATE() as well as the TIME(). You could replace the sound and CD animation with anything else you can trigger from a Shell or ARexx script. The result might even do something useful...

netconnect £49.95

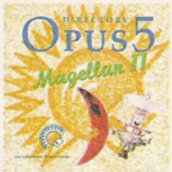


program : netconnect
version : v2.3
format : cd-rom or floppy disks
available : yes
awards : amiga format gold, 96%, cu amiga 94%
amiga magazin (DE) 85%, amiga plus (DE) 85%

The award-winning **NetConnect v2** is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. By using the new Genesis Wizard, a user should be able to connect to the Internet in a matter of minutes. Containing Genesis, Voyager-NG, Microdot-II, AmIRC, AmFTP, AmTelnet, AmTerm, NetInfo, AmTalk, X-Arc and the Contact Manager. Ideal for both an Internet or local area network connection.

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dopus magellan II new £49.95



program : dopus magellan II
version : v5.8
format : floppy disks
available : yes
awards : amiga format gold, 95%

Directory Opus Magellan II is a complete Workbench replacement and/or file management based system. Magellan-II offers everything from file management (copy, rename, view, extract etc), dock bar creation (create your own dock bars - to launch programs, commands, scripts), advanced FTP functionality (with asynchronous operation), custom themes (24 bit icons, different backdrops, custom sounds and scripts, improved user and start menus (ala Windows start menus), greater lister functionality (with full drag and drop), custom menus and much more. Magellan-II is indispensable. Once installed and used, you will never want to go back to your 'original' Workbench ever again.

stfax professional £29.95



program : stfax professional
version : v3.7
format : floppy disks
available : yes
awards : amiga format gold, 95%, cu amiga 95%
amiga magazin (DE) 89%, Amiga Plus (DE) 96%

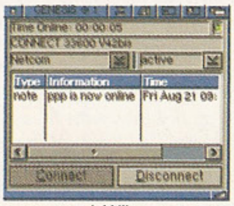
STFax Professional is a commercial fax/voice message program which enables you to use your Amiga as a digital answermachine. Send and receive faxes, create a simple or advanced tree based digital answer system for family members, create a fax on demand service, log numbers via caller-ID, call screen or blacklist phone numbers, setup a mini-BBS, use your modem as a telephone, control other programs etc.

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- *ScanQuix support* - use ScanQuix to directly scan documents from your scanner into STFax!

genesis £29.95



program : genesis
version : v1.0
format : floppy disks
available : yes
awards



Genesis is a new TCP/IP stack for the Amiga computer, allowing both dialup Internet access and local area networking, with the advanced facility to run more than one interface at one time (ie. keep your ethernet network connected, whilst putting your dialup connection on and offline - ideal for Siamese users, LAN'ing one or more Amiga's or an Amiga to PC/Unix/etc).

amigawriter £49.95



program : amigawriter
version : v1.2 (english version)
format : floppy disks
available : yes
awards : amiga magazine (DE) 87% 'very good'.

AmigaWriter is the newest word processor (or word creating) package for the Amiga. Officially ratified by Amiga International, thus supported by the "*Powered by Amiga*" logo, AmigaWriter contains some unique features for Amiga word processors: platform independent (full support for commercial, shareware or freeware plugins), ease of use (easy selection, true WYSIWYG, very Amiga-alike in action), full paragraph control, page formatting, chapter management, support for different image formats and much more. All version 1 users will receive the forthcoming version 2 free of charge (due late 1999).

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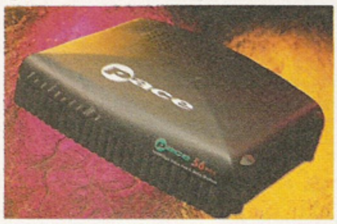
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IOBlix-E	Zorro-2/3	Ethernet module for IOBlix zorro IO card	£ call

miscellaneous software

Various other individual software titles are available. These titles may be interesting to those not wanting to purchase NetConnect v2.

	By Disk	By EMail
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AmIRC	£22.00	£20.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc - system archive management tool (handles lha, lzx and zip archives)	£17.00	£15.00
Contact Manager - system addressbook, works with many net/comms programs	£12.00	£10.00
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SCREENPLAY

The latest games, hints and some clever programming from you!



Well, what can we say? *Napalm* is here and it's every bit as good as we thought it would be. It's the game that proves the Amiga is still a gaming force and it's not just PC conversions that are any good.

The only problem, of course, is that a lot of you won't get the best from the game, or even be able to play it at all, because it needs a pretty impressive Amiga set up. Without meaning to say we told you so, well, we told you so when Quake was released – to play the best games on the Amiga you're going to need one of the best Amiga's you can get.

With *Napalm* and *Quake*, plus the exciting games we've covered in Previews, there's really no excuse not to do yourself a favour and upgrade.

Mark Wheatley

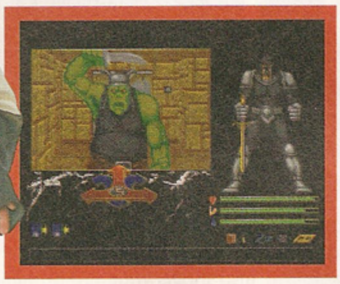
AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws they're not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.







Fighting in a dungeon or in an armoured hovercraft. We like fighting. Mmm.



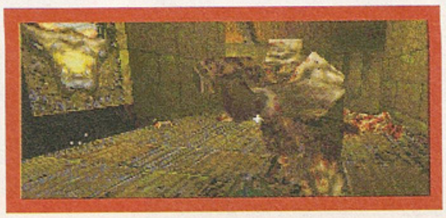




Napalm looks fantastic and plays brilliantly. Read the review and then rush out and buy it!



Take that you alien scum!

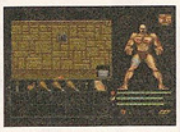


This chap looks a bit mad. Better shoot him.



Soon you'll be able to actually play the game, rather than just looking at these tasty pictures.

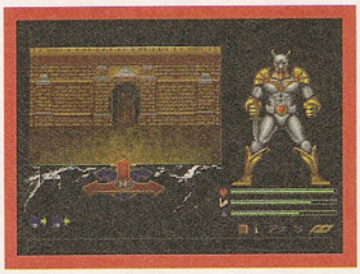
Previews

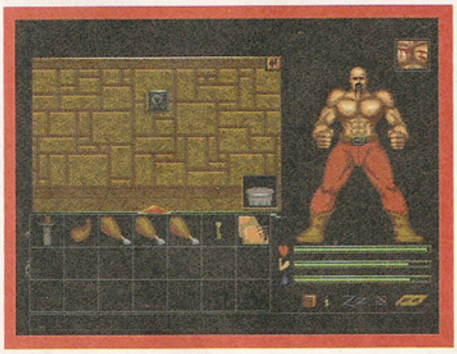


Ben Vost runs through the upcoming new games due for release soon.

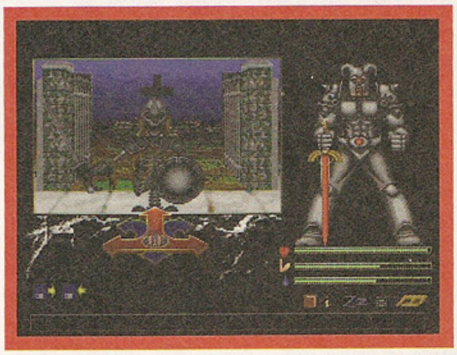
The Prophet



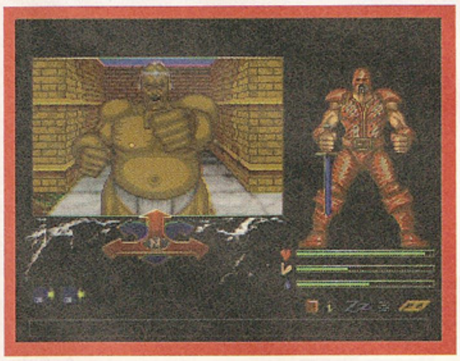
Armour is shown pictorially on your inventory, rather than being listed.



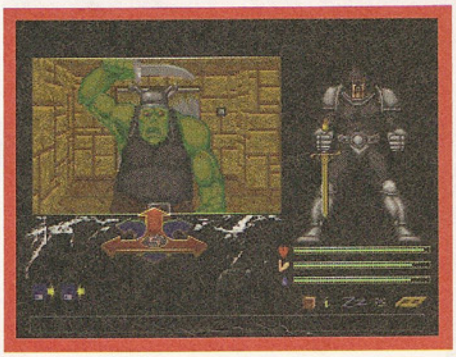
Like Dungeon Master, it's vital to keep food supplies up.



The locations shift from indoor to outdoor to underground.



Bad guys have at least 25 frames of animation each.



The game sticks to step-time animation, rather than real-time.

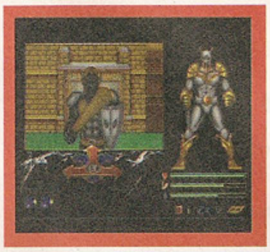
For those with a yen to play a new *Eye of the Beholder*-type game, Alive mediasoft have just answered your wishes by announcing their new game, *The Prophet*. This is an RPG game that has a similar appearance to *Eye of the Beholder* and uses the same kind of step-time animation to move you through the gaming arena.

Whether this is still an acceptable way of playing a game in these more technologically advanced days of *Quake* and *Hexen* remains to be seen, but the feature list reads well, offering over 20,000 locations, with varied settings from dungeons to cities and temples. It also features a visual inventory of items and equipment, much like *Dungeon Master*, but it also shows your character's damage or disease status in a progressive and interactive way.

The monsters in the game (we don't know yet just how many different monster types there are) all have their own unique qualities, from the area of your body that they try to attack to how weak-willed they are.

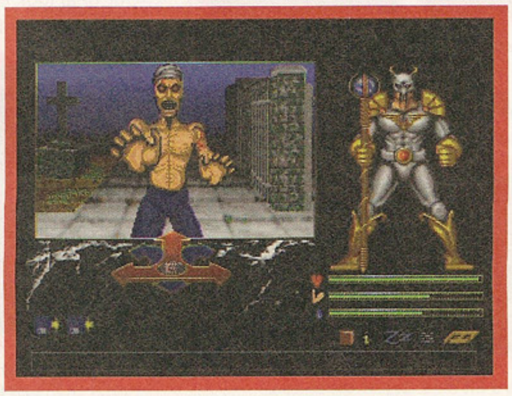
If all this excites you, you can look forward to an exclusive *Amiga Format*-only demo of this new game on next issue's CD. If you can't wait that long, you can pester Alive mediasoft on 01623 467579 for more details.

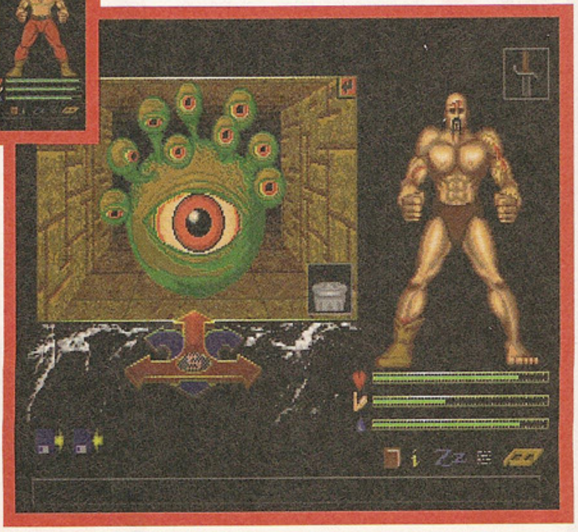






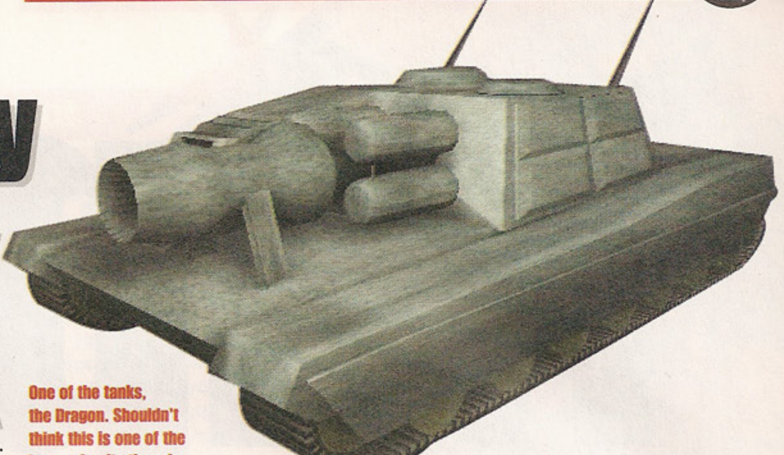
The range of enemies promises to be pretty large.





Fighting a beholder? Armed only with a soiled loincloth?! He must be mad!

Real-time strategy Redux



One of the tanks, the Dragon. Shouldn't think this is one of the low-end units though.

Although George Hornmoen declared to the world that *Maim and Mangle* would never come out because of the incompatibilities between the two PPC kernels and problems with different graphics cards, we've heard that The World Foundry, the developers he passed the existing source code to wholesale, have now found a new team that want to work on the long-awaited title.

For those who've been asleep, *Maim and Mangle* promises a high-end gaming experience. It's a real-time strategy game but it takes full advantage of PowerPC processors and graphics cards, unlike clickBOOM's undoubtedly excellent but hardly revolutionary *Napalm*.





Operation Counterstrike will offer gorgeous intro animations.

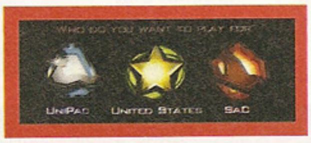
It all ties in nicely with the announcement about *Operation Counterstrike* by a team called Blue Black Solution. The plot is an extrapolation of real world politics and deals with the institution of new alliances along the lines of NATO.

The game is at an early stage but promises to offer some cracking graphics, as shown by the unit graphics on these pages.

Operation Counterstrike is planned for release at Christmas and should be distributed by Sadeness Software. See Blue Black's website for details: http://www.thesnakepit.demon.co.uk/







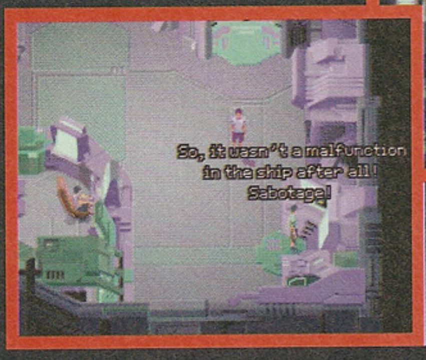
A hovertank (left), a ZsuZsu (right) and the nations of Earth in the middle.

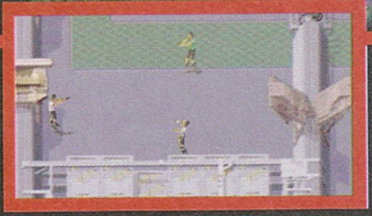
Wasted Dreams

Remember this? *Wasted Dreams* became *Distant Dreams*, then *Distant Space*, which finally became *Wasted Dreams* again. This was because of the fact that while people had been eagerly awaiting *Wasted Dreams* for the best part of two years, they'd never heard of *Distant Space* before and so the development team reverted to the original name once again.

The other odd thing is that Vulcan are once again doing the distribution for the game, after having announced that they wouldn't, so you'll be able to get it from any supplier that holds other Vulcan games. After all this confusion we'll certainly be pleased when we can finally review it! AF







We hope to be bringing you the review of this game soon. No, honest!

Napalm

ON THIS MONTH'S CD AFCD38:-ScreenPlay-/-Commercial-/NapalmDemo_v1.1

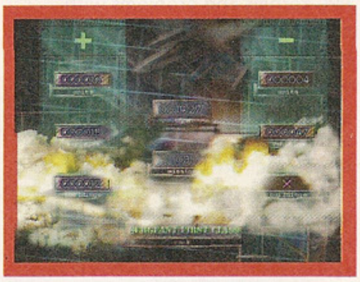
Ben Vost gets medieval on yo' ass with the biggest, noisiest Amiga game yet!

AMIGA GOLD FORMAT

Those of us who have access to other, inferior, platforms know all about the existence of what are called RTS, or Real-Time Strategy games. Names like *Command and Conquer*, *Warcraft II*, *Star Craft*, *Total Annihilation* and *KKND* are bandied around in PC land like nobody's business. Unfortunately, it's also meant that the genre has become rather stale on those platforms and people on the PC say, "Oh look, another RTS game, how quaint."

> **"There's a genuine sense that each landscape is really a huge picture that gets revealed a bit at a time..."**

Part of the reason is that these games don't really offer new stuff over their competitors, apart from new missions and different units and buildings, although the titles I've mentioned are the leaders of their ilk.

From the clear mission briefing to the scores on the doors, Napalm is certainly attractively presented.

In fact, at first glance you could be forgiven for thinking that *Napalm* was nothing but a *Command and Conquer* clone, old-fashioned and just not that interesting. However, even if you're one of these PC-owning RTS buffs, you'll soon realise that *Napalm* has much more to offer than a simple rehash of the same old units and scenarios.

There are no animated intros on the grounds that they're only eye candy and you've really lashed out your £30 to play a game, not look at pretty pictures, and yet it takes up 174Mb of the CD it comes on. Don't be fooled into thinking that the CD is only quarter full either– there are audio tracks as well, twenty of them to be precise, that play along with the game's action and punctuate the loading. There are units that you've never seen in an RTS game before, like tunnel construction vehicles that allow you to sneak past

UEDF UNITS READY, SIR!

UEDF:





Bazooker
One of the best foot-soldiers and good value for money if you keep him behind the ranks.



Radar Outpost
Absolutely vital if you're playing in Low Res, but not quite as important if you're not.



Cheyenne
Don't bother going for the diddy helicopter – just go for this incredibly heavily-armed one instead!



Heavy Factory
Gorgeous animation almost makes it worthwhile on its own, but this churns out the best units too.



Tunnel CV
Although I didn't use tunnels as much as I might, once built they're a great way of getting around.



Light Factory
You need this to be able to build heavier factories. Don't forget that you can demolish your own buildings.



Bastard
A fantastic unit. This chucks out grenades with its revolving barrels, but be warned, it's very expensive!



Nitroglycerin
The good guys' only suicide unit. It's powerful but definitely a one-shot weapon for when you need it.



Special Factory
You need one of these to get your airborne cavalry into action, and to get paratroop backups for your base.







The final destruction of an enemy base.

Play low, sweet chariot

If you don't have a top notch Amiga you'll probably be limited to playing *Napalm* in low resolution – 320x200, 320x240 or 320x256. Any of these modes are somewhat painful to play the game in because of the fact that buildings tend to take up rather a lot of screen area. It didn't matter in *Dune II* because the graphics were very basic and small, but the amount of detail that's been put into buildings and units in *Napalm* means that your command centre, a solar generator and a few units can actually fill up the whole screen, considerably changing the way you play the game.

For a start, having a radar becomes all-important in a way that it isn't for 640x480 play, just so you can see what's happening on your doorstep. It's a shame that there isn't a second graphics set for the buildings and units that doesn't give you as much detail but still offers a comparable playing area.

I got asked a question about whether we'd review the game on an average A1200 today by a reader on the Amiga Format Bulletin mailing list (join up at http://www.egroups.com/list/afb/) and I had to reply that if I did the review on an average (according to our survey last year) machine, it would read something like: "It doesn't work. I haven't got enough RAM, and even if I did my '030/25 wouldn't be up to the task." This is a game that rewards people who've spent some money on their machines, and if it's out of the reach of those unwilling or unable to spend that kind of money then so be it. It's a better game because it hasn't been crippled to play on a 2Mb A1200, or a half meg A500.



I know that's not going to be a popular view, but unfortunately it really fits this particular situation.





Low Res means you don't get much in the way of visibility, as you can see.



Getting a radar outpost becomes a priority when you're playing in Low Res.

enemy defences as though they weren't there, plus fake units and buildings that cost little to build but which can distract an opponent's attention away from the real deal.

One of the really notable things about *Napalm* is the fact that the terrain doesn't appear to have just been built on the fly with pre-formed graphical building blocks. There's a genuine sense that each landscape is really a huge picture that gets revealed a bit at a time because of the meandering of your units, especially when you come across huge derelict skyscrapers or meteors that have ploughed into the ground, giving the game something of an otherworldly feel.

In addition to this, although most of the missions are on the order of staying alive for as long as possible and, oh yes, if you can, wipe out the enemy, it's not all trashing your opponents' joint since you'll have to take over buildings or use special units to destroy them and so on.

As for the differences between the good guys (the UEDF, or United Earth Defence Force) and the unnamed robot rebellion, they're slight and mainly limited to different units. However, you might imagine that robots would have no need of "barracks" or even vehicles (why not just build intelligent vehicles?), but they do give a feeling that the robots are an implacable enemy, especially when you see the all-too red blood of a UEDF soldier staining the snow...

Continued overleaf ➡



ROBOTS AT THE READY, SIR!



Giant Antigrav
This laser-armed unit is great for attacks over the water, against buildings or men.



Thunderbolt
Great big zaps come flying out of this dish every so often. Brilliant for frying buildings.



Nuke Missile
This is the bomb. No, really. It takes ages to build one though so don't hang around.



Solar Power Plant
You'll need plenty of these to keep your base going. Try to put them out the back.



ROBOTS!



Heavy Factory
Like the UEDF's heavy factory, this makes some of the best units in the whole game.



Predator Tank
This fast-firing heavy unit is ideal for use against buildings or other units.



Spy Satellite
This uncovers ALL terrain so you don't need to send units scouting any more.



Technician
Absolutely vital if you'd like to take over buildings rather than blow them up.



Antigrav Factory
Makes Antigrav units. Well, what did you expect? Hot chocolate as well?



Has anyone got a map?

The maps for *Napalm* are pretty extensive, and even though this is a first level robot mission, there's still plenty of wandering around to do. They also comes in three different "flavours" – snow, desert and forest.





If at first you don't succeed, build a tunnel and chuck units through it.

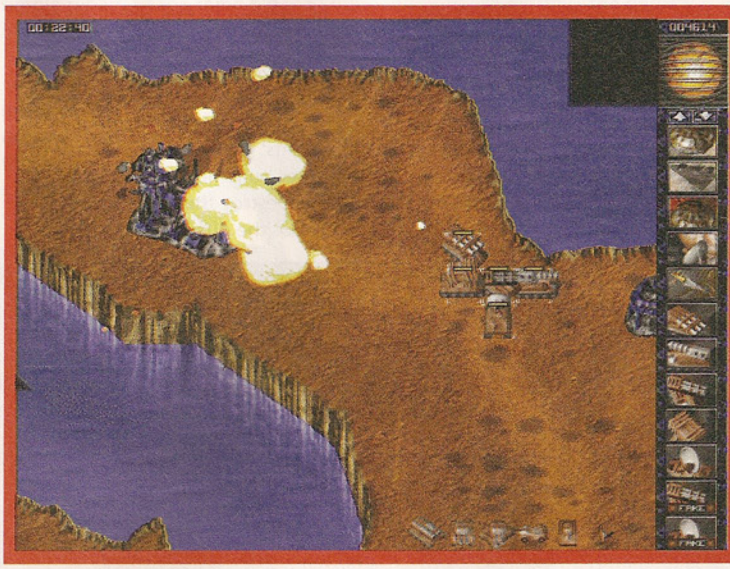
The game itself is pretty tough, as players of the demo on our CD (again, for those who missed it the first time around) will attest. The enemy really hound you and will happily run away at the first sign of serious trouble to get more units to come back and punish you for your indiscretion. As such, I reckon it'll take quite some time to get through them all, and then you'll have to start again from the other side…

There are tactics that seem to be quite effective and there's the usual problem of units all wanting to be on exactly the spot you clicked on, so you still have to do the micro-management thing where you have to adjust each individual troop or vehicle until it's in exactly the right place for you.

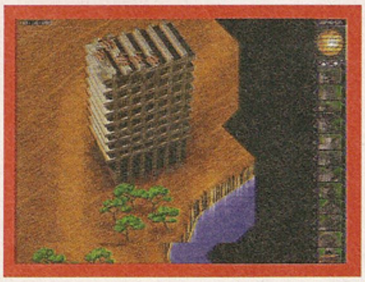
One of the things that's really nifty about the game is the quality of the animation and sound effects. The units all move nicely and the designs for some of the bigger weapons are superb, like the UEDF's Bastard tank which has four revolving barrels that chuck out grenades.

As your vehicle takes damage, fewer grenades come flying out of the barrels per revolution, until you're down to a measly one every couple of seconds and the unit dies. The UEDF don't have it all their own way, though – the robots' Predator tank can curve a football like no other boot… sorry. I mean that it too has a revolving mini-gun-style barrel mounted on top of its chassis that

> **"The units all move nicely and the designs for some of the bigger weapons are superb, like the UEDF's Bastard tank…"**



Four of the robot heavies take on a UEDF factory.





Running costs

Much like running a tank or a helicopter, the running costs for *Napalm* are fairly steep. I guess you might be able to get away with an '030/50, but to be honest I think an '040 is a realistic minimum, and that's for Low Res play. To be able to play the game the way it was intended you're going to need an '060 and preferably a graphics card of some description to get a 640x480 playing area.

Then there's the fact that the game needs 16Mb of RAM to work at all. In fact, clickBOOM install the game with a "Napalm.BOOT" script which reboots your machine to free up as much RAM as possible to let *Napalm* get enough. Oh, you'll also need a CD-ROM drive as much of the game is kept on the CD, unlike *Quake*, so you'll need to have it in the drive when playing.

If you've got all these things then the game should run just fine. It does here on my CyberStorm Mk.III with 64Mb RAM and CyberVision64/3D. Not that that's a great graphics card, though.



Spy planes are very handy for the good guys.



Even having huge quantities of units won't stop a determined baddie if you don't watch all sides.

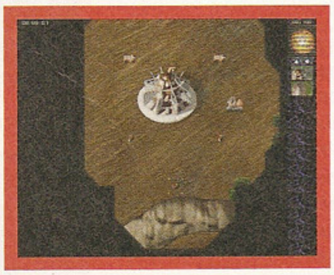
spins at high speed as it chucks hailstorms of lead upon its enemies.

The robots also have one of the best units on the battlefield that the UEDF can't hope to compete with – the spy satellite, which uncovers all the terrain there is. That means you don't have to scout, but you'll have to wait until later in the game to get that and it doesn't come cheaply, or quickly.

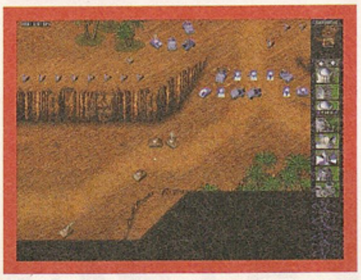
Overall, this is an absolutely cracking, original Amiga game.

You'll need a highly powered Amiga to play it, but it's worth your while since *Napalm* will keep you engrossed for hours on end in every session. Here at *Amiga Format* we can only hope that the TCP gaming facility doesn't come out because it may well make this game the biggest threat to bringing out a new issue on time since *SWOS* first tore the team apart over dodgy offside goals.

For gamers who like a bit of thought to their strategy games, this might not appeal quite as much as the Avalon Hill favourite *Squad Leader*, but for those who like the appeal of a game that's easy to get into, hard to complete and incredibly fun to play, *Napalm* really has it all.







This level is lovely. Build plenty of bazooker men, sit them on the cliff and watch the fireworks.



Unfinished business?

Those of you looking forward to a network game of *Napalm*, or to hearing its audio delights through your expensive sound card, will be somewhat disappointed. The software only comes with drivers for Paula and the normal null modem connection to start off with.

clickBOOM have said that they'll make these available on their website, and obviously we'll put them on our CD, but clickBOOM haven't got a great reputation for delivering add-ons for their games. This may be because they haven't sold well enough for them to continue paying for added development, but even so, if you only have an Ethernetted Draco machine you'll be out of luck to start with.









The in-game controls are succinctly explained in the manual and this options page is clear too.

Speeling mistokes?

One of the odd, and slightly bad, things about *Napalm* is the poor spelling that's evident throughout the game.

On units like the "Plasmer" it may not be important since it could be argued that it's a trade name for a type of unit, but things like "Spy Sattelite" aren't really forgivable and it really detracts from the polished touches that clickBOOM have obviously added.

DEVELOPED BY: clickBOOM
SUPPLIED BY: clickBOOM, but widely available
PRICE: £29.99
RELEASE DATE: Out now

Pros and Cons

- + Fantastic visuals.
- + Addictive to the max.
- + Enemy intelligence pretty high.
- − Slightly unfinished feel to the game.

OVERALL VERDICT:
Who need ports? This original game kicks serious butt.

90%

TOTAL CONVERSIONS FOR Quake



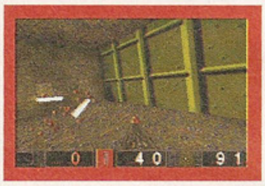
The Aliens conversion actually adds new elements to Quake, such as the risk of being implanted.



As if there weren't enough Quake CDs doing the rounds, Ben Vost checks out another one, from Alive mediasoft.







The Aliens conversion is definitely the main reason to buy this CD.

Picture the scene: you've played *Quake* to death in its default incarnation and you've gone through all the extra levels and total and partial conversions on our *AFCD*s. What's next? Well, you can get a CD with loads of levels on it for a very reasonable price from a number of Amiga dealers, and you could get *Total Quake* from Alive mediasoft.

However, before you make this your first choice you should be aware of several things. Firstly, because of low volume this is a "gold" disc and thus more fragile than normal pressed CD-ROMs. It has no label and is in fact an untitled CD.

> "...the CD isn't very full. It only has about 120Mb of files on it, some of which you'll have already seen on our AFCDs..."



Secondly, the file system used for the disc is Joliet, which is the Windows "standard" for CD-ROMs to handle their stupid method of naming files. If you're using *IDEfix97*, you'll be able to read this disc with no trouble. On the other hand, if you're using *AmiCDFS* or *AsimCDFS* (unless you've got your hands on the beta or full version of 3.10), you'll be able to read the disc but you'll only get the default ISO 9660 level 1 names, which are truncated and thus probably won't work. Finally, the CD isn't very full. It only has about 120Mb of files on it, some of which you'll have already seen on our *AFCD*s in the past.

To add insult to injury, the authors of the disc haven't even extracted them from their .ZIP archives to help fill up the CD – you'll have to do that yourself. There are also a lot of editors on the CD which you won't be able to use since they are Windows' execrables... I mean executables.

There are some good conversions on here, particularly the *Aliens* one, which I don't think has been on an *AFCD* yet, but these are all Shareware add-ons for *Quake*. There's nothing to stop you from downloading them yourself, so it's not as though you're paying your tenner to get anything out of the ordinary. If you want to buy something for *Quake*, your money would be better spent getting *Time of Reckoning*, which not only has a bunch of *Quake* add-ons, but also ones for *Doom* and the as-yet-unconverted-to-the-Amiga *Duke Nukem*, along with a nice GUI to help you install the files and run them on your machine.

Total Quake isn't the best CD I've ever seen and should really only be of use to the *Quake* add-on completist, who'll probably already have all of these levels anyway.



Dark, moody and frequently deadly.

SUPPLIED BY: Alive mediasoft (01623) 467579

PRICE: £9.99

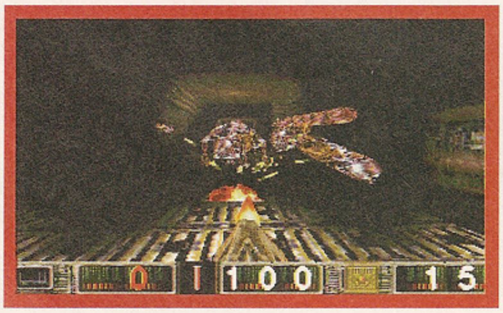
REQUIREMENTS: An Amiga that can run Quake, plus a copy of Quake

Pros and Cons

+ The Aliens conversion.
- Joliet CD format.
- Gold disc.
- Archived files on an empty disc.

OVERALL VERDICT:
Don't waste your money on this CD.

25%





It's April so Mark Wheatley gets to fool around with the...



AFCD38:-ReaderStuff-/-ReaderGames-

Okay, so we're only featuring two games this month. That's not because they were the only ones we received, it's simply because the office A1200 decided to go on strike before we could play the rest. Once we meet it's demands and cajole it into working again, we'll look at the rest of the games you sent us.

The two games we've got sum up the spirit of Reader Games, though. *Recon Team* is the result of constant improving and upgrading, and *High Noon* is a simple game that's impossible to put down. If you're prepared to spend time on a game and you think you've got one that'll stop the whole *AF* team working, send it in and you'll get the benefit of our advice, and maybe a crisp £50 note too...

Recon Team/ Getsome 3

Regular readers of this section of the mag will be familiar with Mr. Cole's *Getsome* game, dispensing death from a helicopter through the use of missiles, bombs and Yoga-loving pop star Sting. Unfortunately, despite being the third in the series, this version just adds some more weapons and doesn't address the main problem with the game – the lack of a feeling of a set challenge. Fortunately, that's exactly what *Recon Team* provides.

Using the same graphics as *Getsome*, this time you have a small team of chaps who must complete a ground-based mission and survive until they can be picked up by helicopter. The mission, in keeping with *Getsome*, is to shoot anything that moves until you're surrounded by a pile of little bodies, oozing blood.

This time though, the enemy shoot back. Your men can only move up and down the screen, but if you lose a life your active soldier moves slightly more to the right of the screen. That's basically it.



It looks very pretty, it works well and now you have the challenge of first staying alive, although this is fairly simple, and second, improving your stats – trying to lose fewer men, using fewer rounds of ammunition, killing more of the enemy, etc.

For those who like computer-based carnage, get this booted and start shooting.



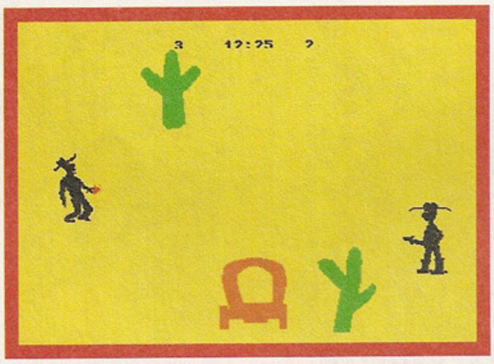
Recon Team uses the same graphics as the *Getsome* games, but is much more challenging.



AUTHOR: A. Cole
LANGUAGE: Blitz 2.1
VERDICT: A fun shoot-em-up which proves that a bit of perseverance and effort can really improve a game.

High Noon





Very basic and very good.

This is one of the simplest games we've had for a long time, but it almost won the £50 prize nonetheless. You have two gunfighters on each side of the screen, each controlled by a different player, and the first to shoot the other one wins. Apart from that, there's just a couple of cacti to hide behind, a stagecoach which occasionally rumbles up the screen and a ridiculous amount of addictiveness and playability. *High Noon* took just 800 lines of code and six hours to program and it's not much to look at – the gunfighters look amusingly camp and the graphics are quite gaudy and basic, but snazzy graphics and sounds can all be added later if the gameplay's there. Don't judge it by its looks, just play it and see if you can tear yourself away...

AUTHOR: Jon Lindsay
LANGUAGE: Blitz 2
VERDICT: Who needs top graphics when a game is this fun to play?

READER WARRANT

When you're sending in your submissions make sure you also give us:
1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

The address to send your stuff into is:
Reader Games • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW

Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

In respect of all material which forms my reader contribution to Future Publishing's *Amiga Format*, I hereby warrant that:-
1. The material is original and does not infringe any other material or rights;
2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
3. That there are no legal claims against the material provided;
4. That I have full power and authority to provide this material to Future Publishing.

Signature: ___________________________

Space Station 3000

Work In Progress

Space Station 3000 is about to launch, so Digital Images' Stuart Walker shows you around for a final time.

Well, here it is, the last *Space Station 3000* WIP. By the time you read this, the beta testing will be going through the final stages and it will be ready for publishing. No stone has been left unturned, as you'll soon see.

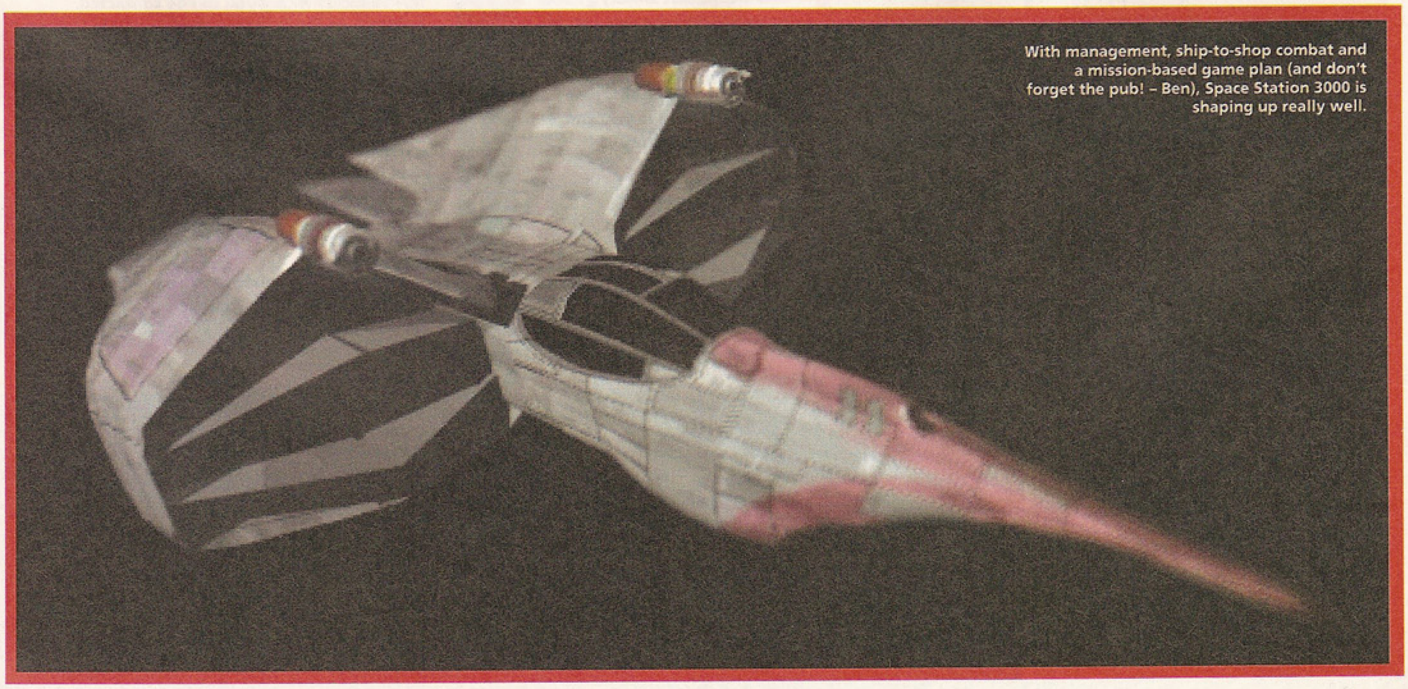
There are numerous cut-scenes and animations throughout *Space Station 3000*, including a stunning intro, the last frames of which are now being rendered.



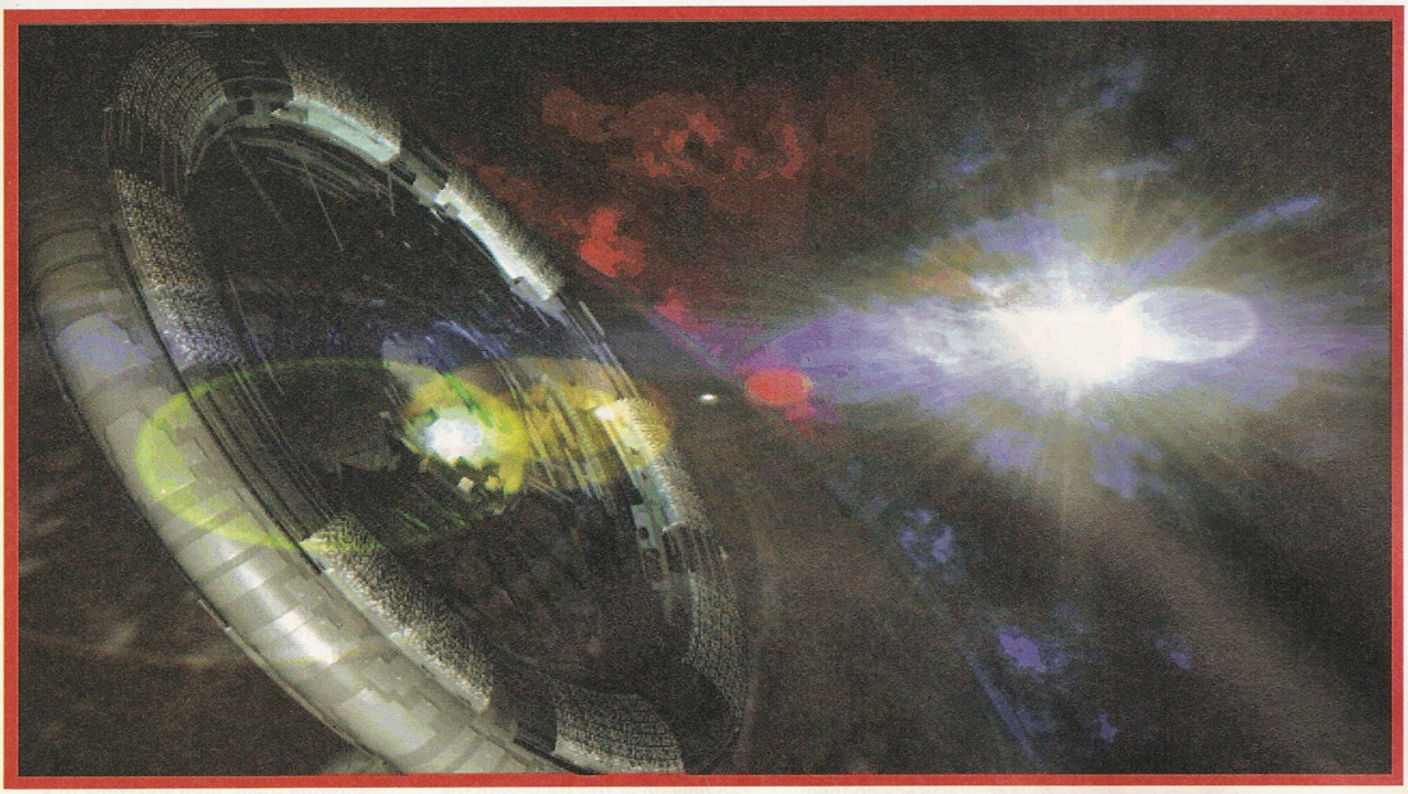
> "You can't just go running into an enemy installation with all **guns blazing** otherwise you'll be caught and killed."

We wanted to make *Space Station 3000* a visual feast, even with the install programme. Commodore's default installer is ugly and old now, as we all know, so we've written our very own installer with an attractive GUI. The installer will even check your hard disk to make sure you have enough space before continuing.

There are many missions which have been included throughout the game which you have to complete to make money or to stay alive. These missions will require some tactical thinking. You can't just go running into an enemy installation with all guns blazing otherwise you'll be caught and killed. Missions will include things from destroying pirate vessels to exploring unknown planets and blowing up enemy bases.



With management, ship-to-shop combat and a mission-based game plan (and don't forget the pub! – Ben), Space Station 3000 is shaping up really well.



There will be three main styles of gameplay with *Space Station 3000*: a strategy/money management sim where you build up your space station while arming it with weapons and hiring crew to keep it running; some *Doom*-style shooting when you board enemy ships and bases; and another style, which I'll have to explain in more detail.

You'll be placed in the captain's chair and you'll command your crew while in battle, giving each member different orders. For example, you'll tell the weapons officers to fire at the enemy ships while you ask the engineer for a status report, at the same time as asking your communications officer to hail the enemy vessel.

There will be a range of different planets you can visit. Each one will have different trading and piracy prospects. A planet with good trading prospects like Earth will make you a lot of money from people purchasing goods from the shops, but there won't be many fights because of the good policing systems. These planets will come with a hefty licence fee though. Some planets may be war zones and will therefore have high piracy rates and low trading prospects, hence their very low licence fees.

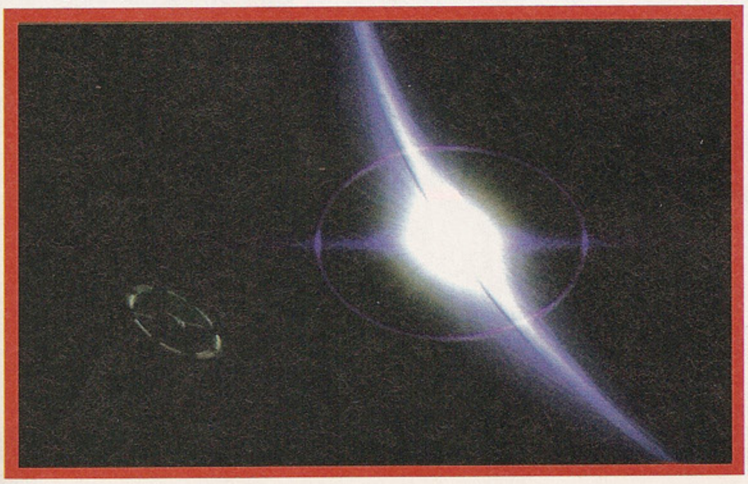
You could pop down to the pub (yup, they'll still be around in the 31st century!) and talk with various people over a nice pint of beer. You could have a chat with some crew members or some visitors. You could even buy computer software upgrades from people there.

There'll also be a large quantity of things to research which could be used to trade or to upgrade your space station.

Space Station 3000 will include support for all graphics cards, as well as AGA to ensure graphical excellence. The enemy intelligence will also be superb. Also, as I said a few months ago, a CDDA soundtrack will also be included to make sure that the sound is of the highest quality possible.

> **Some planets may be war zones and will therefore have high piracy rates and low trading prospects...**

We don't intend to stop here, though. *Wipeout 2097* is following right behind and we also have a 3D beat-em-up called *Kijitsu Warriors* on the way, plus a 3D football game called *Digital Soccer*. Keep an eye on *AF*'s Previews for more details.



Contacts

Digital Images website:
http://www.digital-images.demon.co.uk
Announce only mailing list:
digital-images-news-subscribe@egroups.com
Discussion mailing list:
digital-images-subscribe@egroups.com
If you have any questions about any of our products, you can email:
info@digital-images.demon.co.uk

Ordering

***Space Station 3000* can be pre-ordered direct from our publishers, Blittersoft, from their website at** http://www.blittersoft.com **or by telephone on 01908 261466.**



Gamebusters

THE COMPLETE Quake SOLUTION PART 3

Ben Vost starts getting into trouble in Quake.

Although the first two levels of the game are jolly easy and you can practically do them with your eyes closed and one hand tied behind your back, Level 3 – The Necropolis is where things start getting a little hairier. You'll recognise the start of the level from the fact that it's the zombie one from the demo that runs when you start *Quake*. It's the zombies that make this level somewhat harder since you can only take them down permanently by blowing them to bits, something you can only do at this stage with the handily-provided grenade launcher.

Remember that if you shoot them with your shotgun or nailgun, they may fall down but they'll be back up again and throwing chunks of rotting flesh at you in no time.

Anyway, the start of this level should be very familiar – the four zombies waiting around the first corner, the two ogres, one hiding round the next corner, one opposite in a cage, the door to your left, the stairs to your right and so on, so dispatch all the bad guys you can immediately see and head for the stairs down to your right first, before the door into the room with the nailgun and collapsing ceiling.

There's an ogre at the bottom of the stairs, around the corner, so you should bounce a couple of grenades round it to get him riled, retreat to the top of the stairs so his grenades don't reach you and then pound him with whatever you have most of.

More zombies

Once you've got rid of him, follow the corridor around, getting the shotgun shells, until you come to a little bridge. You may be able to hear the moans indicating the presence of more zombies, and there'll certainly be one to blow away when you arrive. Kill him, then cross the bridge into a small room with a lift. If you're careful you can get more zombies to enter this room while you're on the lift, thus getting out of their way.

Once you've got rid of them you can follow the tunnel which leads



Look familiar? It should – it's the start of level three and you'll have seen in on the rolling demos.

Remember that this ogre isn't very good at throwing grenades up stairs. Of course, he can climb them.

Getting to the secret areas on this level is actually pretty easy, which makes a nice change.

...look down on the zombies and blow them up with grenades! They can't get you at all!

Dodge the spike, drop the zombies, tell the ogre, climb the steps and kill the new zombies. Easy.

This is annoying and time consuming. Keep shooting up to kill the two ogres and the zombies.

you into the water. You'll see the gold key that the player gets in the demo level and you'll hear some doors open and zombies groan when you get it. Backpedal into the tunnel and leave that area. Go back into the room with the lift, go up and drop off the bridge outside into a room.

There'll probably be another zombie there so keep your grenade launcher to hand. There'll be a doorway in front of you, but also the lamest of all of *Quake*'s secrets to its left. Just get the bits and bobs inside this "secret" area and then go through the door.

You'll be able to get on a lift that'll take you up into the barred area where the ogre was. There's green armour on the floor here but remember that you can't swap better armour for worse, even if the better armour is worn away. As soon as you step on the button in here the bars will open up, but where the first ogre was hiding around the corner from you, the wall will open up and another ogre will come steaming at you. Swat him down and then go through the big double doors.

Get the double barrelled shotgun, shoot the dagger button and go down the stairs. Go along the passageway and you'll come to the open bit with the scrags. Shoot all three down and get the ogre too. There are some zombies left over below you from when you got the gold key. You can drop grenades on their heads and there's a ring of shadows in the deep bit of the water below you so you can drop down to get it, although it's not really needed.

You'll go through the gold key door (take out a scrag) and come to an area that opens out on your left. On the right-hand wall of this area is a diamond shape. What you have to do is enter this room and go to the left where the floor is different. Lights will come on and a huge pointy stick will come out of the hole, transfixing anyone standing in the way. You have enough time to retreat back out of the room before this happens, but don't hang about.

Sewer thing

On the floor of this room you'll see a grid going down into the sewer. Drop into the sewer facing the diamond-shaped hole and there'll be a couple of zombies waiting for you so grenade them. There's a loop of corridor in the sewer so progress around it, killing the zombies that infest it, and grab the goodies up one ramp before using the ramp at the other end to get out of there.

There'll be an ogre above you on a ledge. Take him out (not with grenades as you can't fire them high enough) and climb up there to get his rockets and the spare pack. There's a button on the back wall of this ledge and hitting it will open four holes in the walls. Out come zombies, but you can take them out at your leisure with your grenade launcher. Don't forget to look in the holes they came from for more goodies.

The next bit's a pain, although it's not too tricky. The big doors at the end of the hall you're in conceal a pair of ogres and a few zombies. The ogres have a hard time hitting you with their grenades because they're on platforms quite high up and in trying to hit you their grenades bounce off the walls. Plug away with your shotgun and nailgun for a bit until there are no more grenades raining down, but also be ready with the grenade launcher for the lurching zombies – often the ogres' grenades will help you with this task.

Once you've killed both ogres you can run in and grab the yellow armour from the space to your right (I bet you need it by now!). Don't grab it and run – shoot the wall behind it first. This will reveal the last secret area, the ogre platforms, and you can get all of the rockets that get left behind.

Last room now. There's the usual dagger tile on the wall opposite and shooting it locks the door and the roof starts descending. Fortunately, at the very last moment it splits in two and the floor you're on will rise to the top of a shaft.

There are two fiends here, and they'll be asleep to start with. If you're really quick you can run to the exit. Just don't take them on unless you're mega hard... AF

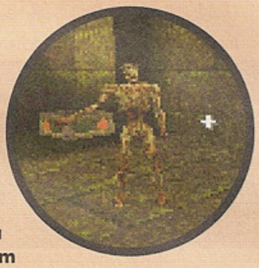
MORE BAD GUYS

Scrag:

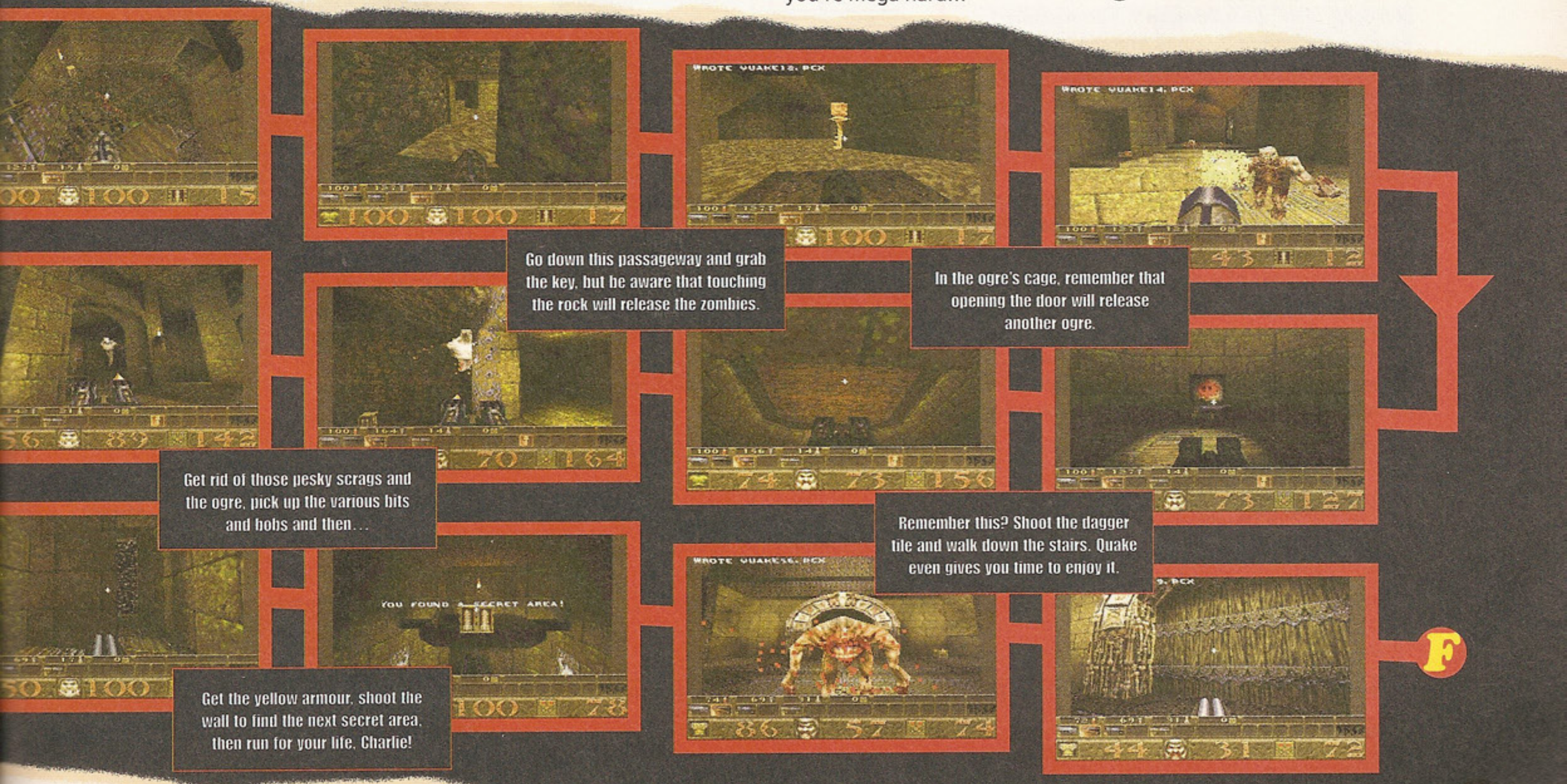


Free-floating, horrible-sounding, anaemic, snot-firing freak. Not too tough but they like to hide and surprise you. Take 'em out with the nailgun because you'll want to stay at a distance so you can dodge their snot.

Zombie:



These swine just won't lay down and die. Well, unless you blow them apart that is. Although you can "kill" them with a couple of shotgun blasts, they'll get up again and agin unless you hit them with a grenade.



Go down this passageway and grab the key, but be aware that touching the rock will release the zombies.

In the ogre's cage, remember that opening the door will release another ogre.

Get rid of those pesky scrags and the ogre, pick up the various bits and bobs and then...

Remember this? Shoot the dagger tile and walk down the stairs. Quake even gives you time to enjoy it.

Get the yellow armour, shoot the wall to find the next secret area, then run for your life, Charlie!



PD Select

Dave Cusick gets his monthly fix of the finest PD software around.

SinED II v2.10

BY: Jarkko Vatjus-Anttila
WARE: Share
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: 80p + £1 P&P

SinED was created because its author felt that there weren't any decent Shareware sample editing packages available on the Amiga. Indeed, in the introduction to the AmigaGuide document which accompanies the program, the author strongly attacks several sample editing packages for being "so badly programmed that [they are] impossible to use", giving himself quite a lot to live up to in the process.

In fact, *SinED* does offer a lot of features. It's extremely flexible in that it works with virtual memory managers, comes with optimised 881 and '060 versions, and yet can be run on a bog standard 68000, KS2.04 machine. However, you'll need to have AHI.device v4+ in your Devs: drawer.

As you'd expect, you can trim, cut, copy and paste a sample using *SinEd*, and zoom in and out of the waveform so as to make these operations easier. In addition, the program has several built-in wave types which can be applied to samples, including Sine, Saw, Triangle, Box and White Noise.

The range of effects is pretty impressive. You can pan samples from one stereo channel to the other, boost sample peaks to make the sample clearer, filter away crackles, flip the sample vertically or horizontally or blur

Grafix

When I was a nipper I used to be a reasonably proficient artist. At one stage, enterprising youngster that I was, I even persuaded an acquaintance with a photocopier to churn out dozens of copies of a comic book I'd created, which my friends and relatives then felt obliged to purchase. Ah, those were the days.

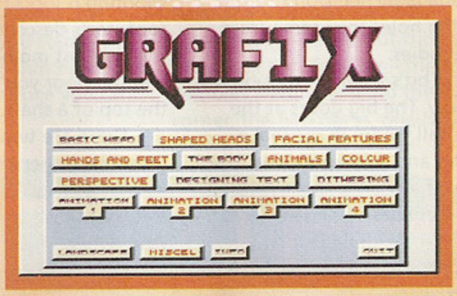
Unfortunately I got into computing before affordable, high-quality home scanners came on the scene, and never quite progressed to the stage of mastering drawing with a mouse. Since then, years spent at the keyboard have taken their toll on my once passable penmanship, and I'm now incapable of drawing anything that doesn't look like the result of a particularly ghastly nuclear accident.

***Grafix* provides an introduction to creating computer graphics for the artistically challenged. It begins by providing general advice on drawing cartoon-style characters and goes on to deal with a variety of subjects, many of them particularly relevant to computer-based art.**

This being a demonstration, only a few of the tutorials are actually included. The sections on drawing heads and bodies, designing text, dithering colours, animating objects and creating background landscapes are all present.

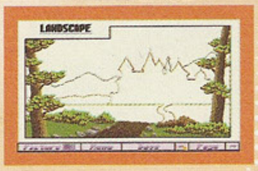
The full version of *Grafix*, which costs £4.99, also includes sections on fancy heads, facial features, hands and feet, animals, colour, perspective and more, along with much more detail on animation.

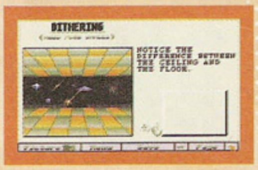
***Grafix* is nicely presented and offers some helpful advice in easily digestible chunks. If you're the type who cringes at Christmas when someone suggests playing *Pictionary*, you could do worse than take a look at this disk.**



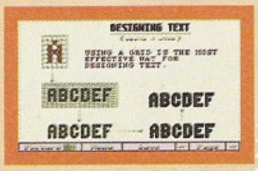
The features available in this demo version.



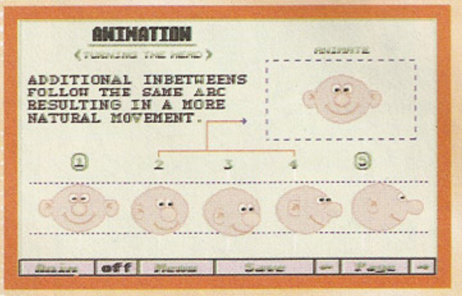




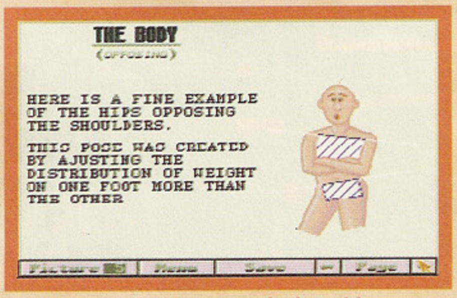




Text, dithering and jaw construction...



There's a lot of good advice on animation...



...as well as on drawing correct body positions.

BY: Silly Software
WARE: Share
PD LIBRARY: F1 Software
NO OF DISKS: 1
PRICE: 80p + £1 P&P

Moonbases 1.2b demo

Hands up if you remember *Dune 2*. I should hope that you all do – it was, after all, the game that launched the Real-Time Strategy genre. When *Dune 2* appeared several years ago, I had the enjoyable task of reviewing it for another Amiga magazine. While it wasn't perfect, it was a thoroughly absorbing game and its novel approach was to inspire a long line of imitators and successors.





The RTS genre has since become breathtakingly popular, with the most notable recent RTS release being the highly impressive *Napalm*. Now *Moonbases* aims to follow in the footsteps of these hallowed titles, and by jove it's pretty good too.

Graphically, *Moonbases* can't hope to compete with titles like *Napalm* – its washed out colours and small playing area handicap it rather too much in this department. But in terms of providing an addictive long-term challenge, the author seems to have done an excellent job with this game.

In attempting to build a successful moonbase while warding off the unwanted attentions of rival settlers, the player has a decent selection of buildings and vehicles at his disposal. Your moonbase provides power for other buildings which you can construct at any time, so long as you have sufficient funds available to build them.

The available buildings include a Satellite Uplink Centre which provides an overview of the entire battlefield, a geological survey centre which allows you to locate mineral deposits in the area, and a vehicle construction centre. You can also construct solar arrays to generate more power for your settlement.

In terms of vehicles, you have access to fast, manoeuvrable recon buggies and hovercraft, as well as light and heavy buggies and hovertanks which, as their names suggest, are increasingly heavily armed and armoured. You can also buy minelayers,

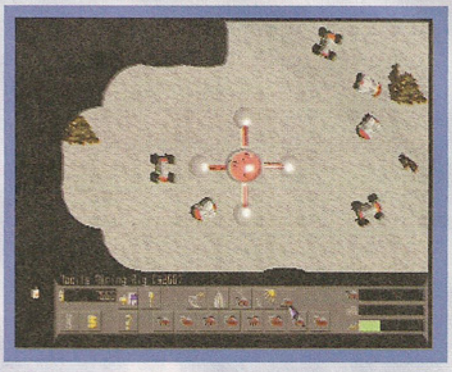
Build up your forces and then attack your opponent's base in this *Dune II* real-time clone.

Selection OF THE MONTH

minesweepers and mobile mining rigs.

Your objectives vary from mission to mission, but basically your aim in the single player missions is to succeed at the expense of the computer's forces.

This is actually a Freeware beta release and as such it contains only two of the twenty single player missions to be included in the full game, and doesn't have a Save Game option. The full game will also allow for two player games via serial cable or modem and will include a map editor. *Moonbases* will be distributed by Verkosoft of Germany.



BY: James Marshall
WARE: Demo
PD LIBRARY: Classic Amiga Software
NO OF DISKS: 1
PRICE: £1 + 75p P&P

the sample to produce a foggy sound. You can also modulate a sample, combine it with another sample, add echo, up- and down-sample it to change its pitch, or flange it. What's more, since the program is modular in nature, further effects routines can be added in the future.

SinED even offers a drum machine feature which allows you to blend drum samples together to produce killer fills. Essentially, it's just an 8-sample mixer, but it's a nice addition which presents some interesting possibilities.

If you don't feel other sample editors do what you'd really like them to, *SinED* could be well worth a look. Should you decide you like the demo – which, incidentally, doesn't let you save your work – then the full Shareware version is available for US$20.

Mausoleum

BY: Ben Wright
WARE: Free
PD LIBRARY: Roberta Smith DTP
NUMBER OF DISKS: 1
PRICE: 90p + 50p P&P

Mr. Wright causes me to worry at times. His back catalogue of releases includes *The Black Church*, *Rubicon* and *Rites of Hell*. Only *Scavenger*, his accomplished *Asteroids* variant, has been free from a dark mood. This, his latest collection of tracker modules, could scarcely be described as a light-hearted joy-fest.

On the first disk, you can sample the delights of tracks called *Grotesque Glory*, *Book of Lies* and *Genetically Evil*. All three are stunningly devoid of jollity and employ dark strings, distorted synth whirls, grinding guitars and a smattering of vocal snippets which sound like they may well have been gleaned from a BBC Death And Horror Sound Effects record.

The second disk contains three more tracks, including *The Art of War*, *Inverting The Trinity* and the wonderfully named *Skulbuggery*. Sadly, the dark atmosphere the first three tunes create is punctuated by that weedy *AMOS* ping which alerts you to the need to swap disks. Oh, well.

Anyway, if you enjoy listening to this sort of stuff then you'll doubtless enjoy *Mausoleum*. Personally, I prefer something a little more melodic. Maybe I'm getting old…

Continued overleaf ➡

Brain Games

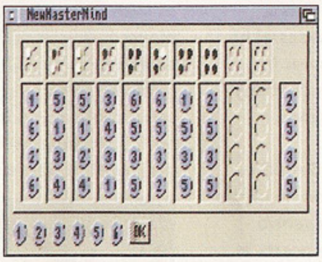
BY: Various
WARE: Various
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1 + 75p P&P

This is a collection of four games which are designed to test your old grey matter.

New Mastermind by Hakan L. Younes is a recreation of that odd little logic game involving pegs. The computer chooses a sequence of four pegs, each of which can be one of six colours. You have ten attempts at guessing the correct sequence.

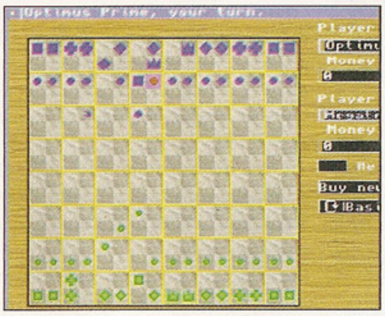
After each guess the computer awards you pegs to tell you how warm you are – a black peg denotes a correct peg in the correct position (but doesn't tell you which), a white peg denotes a correct peg in the wrong position and no peg at all means you've got a completely wrong colour in one position.

I never liked *Mastermind* much when I was a kid, but then, with the likes of *Mouse Trap* around, how could it compete? Now though, I have to admit I find it an enjoyable little diversion.



Yet another version of **MasterMind** on the Amiga.

Multipuzzle by the same author is one of those sliding block games and it runs on the Workbench screen. This type of game has been done a thousand times over the lifetime of the Amiga,



but this time you can load your own IFF-ILBM image into *Multipuzzle* and then slide bits of it around to your heart's content.

AmiTarot starts and finishes with an



irritatingly poor text animation, but those with an interest in Tarot cards will be less bothered about that than about what Laura Vance's little program actually does. Basically, it randomly selects and lays out Tarot cards in one of two layouts. You can then select a card to turn over, whereupon the program explains the significance of the card you've chosen. It's simple, but it's still quite interesting.

Xhess by Joona I. Palaste puts a novel slant on Chess, but does so without a great deal of success. It's a game for two players only – disappointingly, it isn't possible to play against the computer. The twist is that each square on the 8x8 chess board is subdivided into four smaller squares, and instead of the normal chess pieces a number of small units are used. These can either be moved individually or united into units to move as if they were traditional chess pieces.

To be honest, of the four games I would say that only *New Mastermind* really warrants more than a few moments of your attention.

ONLINE UPDATE

New on Aminet this month, there's a demo version of *AWeb 3.2*, Yvon Rozijn's web browser which tends to be either loved or hated. Using the ugly but speedy *ClassAct GUI*, *AWeb* has long been the fastest Amiga browser. Now it's becoming one of the most feature-packed browsers too.

In fact, *AWeb* has been steadily progressing for some time now while *Voyager* and *IBrowse* haven't undergone updates, at least outside of beta testing circles. To the Javascript 1.1 support introduced in *AWeb 3.1*, Yvon has added a number of small improvements and bug fixes. The upshot is that even someone like me, who wasn't at all keen on earlier versions of the program, can't help but be really impressed by it now.

There's a new GUI available for *MpegA v3.0+*. The catchily named *MpegA-Gui v3.12*, which is strangely stored on Aminet as mus/play/mpgagui312.lha uses *MUI*. It's heavily configurable and includes all the usual features, such as a playlist and a sleep function. If you're into MP3s then you should check it out.

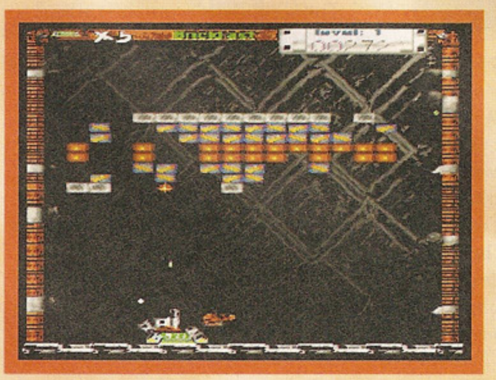
Finally, Christian Bauer's ever-popular *ShapeShifter* Macintosh emulator has now reached version 3.10. There's support for MacOS 8 and *Picasso96* PIP (15-bit colour depth) is now used in Amiga Window mode when it's available.

However, probably the most significant change is that *ShapeShifter* is now Freeware, which means you don't need a keyfile to get at many of the program's features. You still obviously need to get hold of a legal Macintosh ROM image and system software before you can start running Mac software on your Amiga though, possibly including *Netscape Navigator*.

Brickfast

Does the world really need another *Arkanoid* clone? After almost five years of writing Amiga PD columns, I've long since run out of introductions for them. There are only so many ways you can introduce bat and ball games.

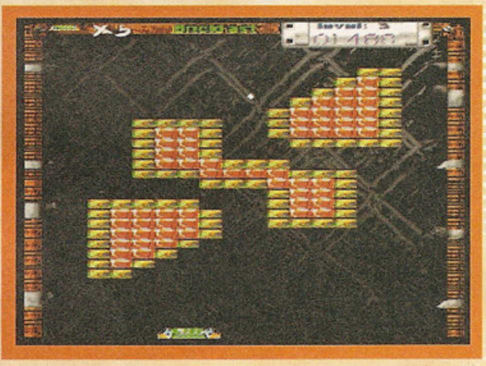
I also reckon there are only so many bat and ball games any one person can possibly own. Given that every *Arkanoid* fan must have at least two dozen decent PD and Shareware clones in their collection by now, I do wonder why they remain so popular with programmers.



Bounce the ball to hit the blocks – you know what to do...

Still, as *Arkanoid* clones go, *Brickfast* is quite nicely put together. It features attractive graphics and decent music, and offers a good selection of bonuses which drop down from the sky when you manage to hit certain special bricks.

This being a Shareware game there are only three levels to play through. This means that unless you're completely inept at hitting a small pixellated ball with a mouse-controlled bat, you'll complete the demo within five minutes of installing it on your hard drive.



BY: Love Dentist / QBHead
WARE: Share
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: 80p + £1 P&P

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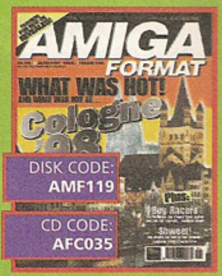
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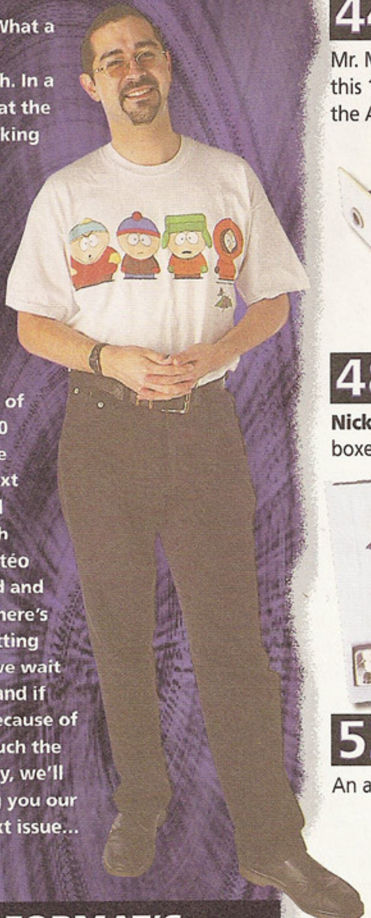
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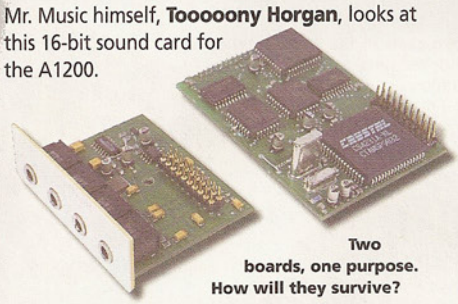
In-depth reviews of hardware and software that you can trust.



Wow! What a busy month. In a way I'm glad that the BoXeR is still baking in Mick Tinker's idea oven since we've had enough to get on with for this month as it is.

What with the long-awaited release of the Prelude 1200 (look out for the Melody 1200 next issue, folks) and Simon's in-depth exposé of the Atéo tower, busboard and graphics card, there's plenty to be getting on with while we wait for the BoXeR, and if it's improved because of the delay, so much the better. Hopefully, we'll be able to bring you our first reports next issue...

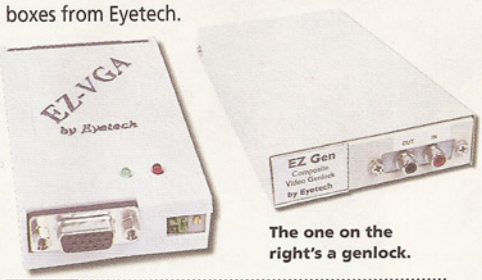
Ben Vost



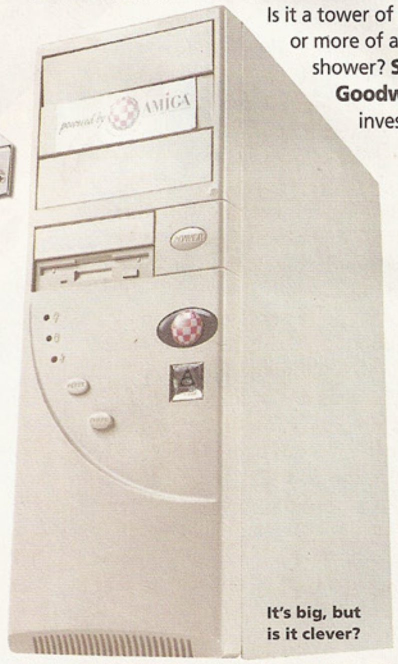
Two boards, one purpose. How will they survive?



Uproar sounds better through it.



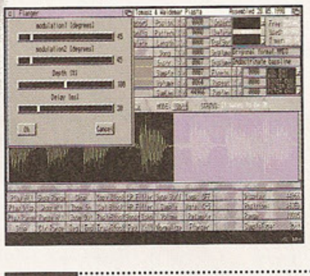
The one on the right's a genlock.



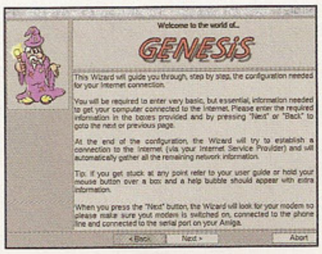
It's big, but is it clever?



It works better if you have jeans.



Don't you say "flanger" to me, young man.



It's easy to set up and easy to use.



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AMIGA FORMAT'S REVIEW POLICY

... is very simple. ***Amiga Format*** is written by nearly all of the most experienced Amiga users in the world and what we say goes. OK?

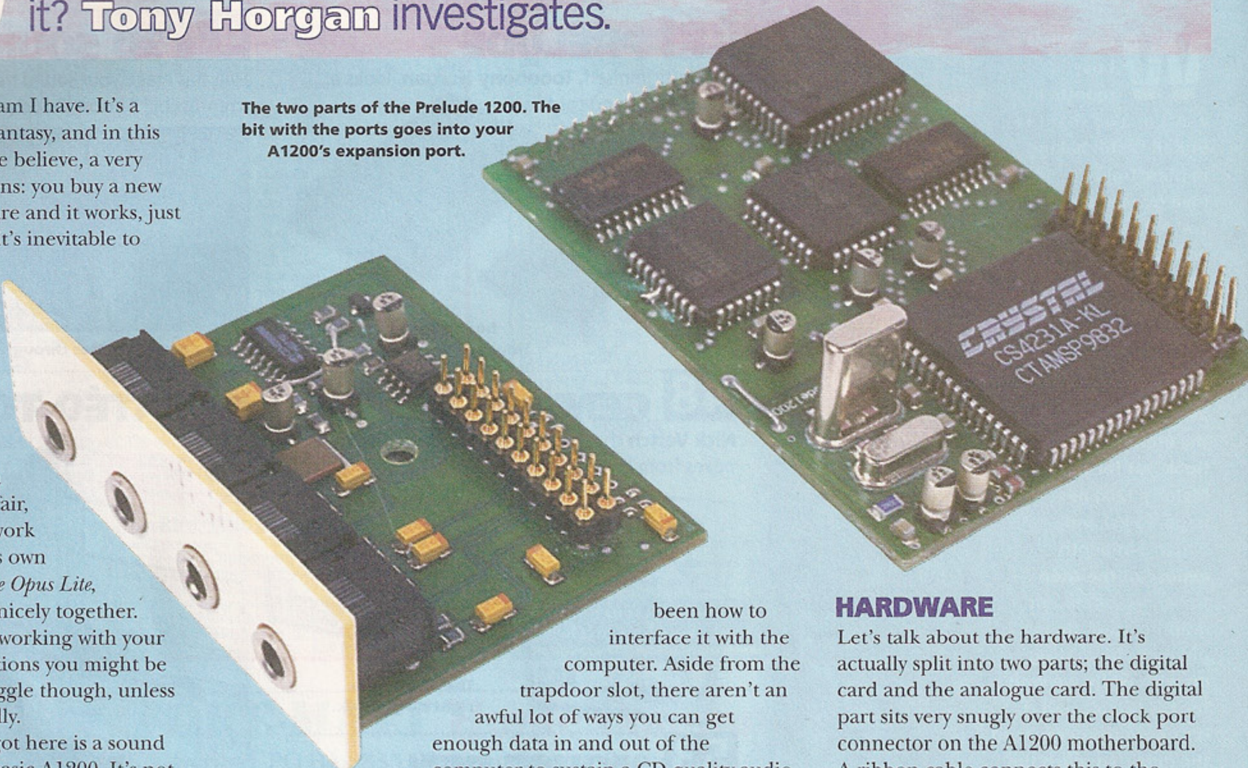
WHAT OUR REVIEW SCORES MEAN

90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an ***AF Gold*** – the most highly prized rating there is.
80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
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Under 40%	The absolute pits.

Prelude 1200

AMIGA GOLD FORMAT

It looks like the A1200 sound card we've waited years for, but is it? **Tony Horgan** investigates.



The two parts of the Prelude 1200. The bit with the ports goes into your A1200's expansion port.

There's a dream I have. It's a naïve little fantasy, and in this land of make believe, a very strange thing happens: you buy a new bit of Amiga hardware and it works, just like that! I suppose it's inevitable to some degree that there would be teething troubles, seeing as most new bits of Amiga hardware are ingenious kludges, especially those designed for a stock A1200. To be fair, Prelude 1200 does work straight away with its own version of *Samplitude Opus Lite*, and the two fit very nicely together. If you want to get it working with your other audio applications you might be in for an uphill struggle though, unless you read this carefully.

So, what we've got here is a sound card solution for a basic A1200. It's not the first, but so far it's definitely the best. If you've had your fingers burnt with A1200 sound cards in the past, you could be forgiven for being rather sceptical at this point.

Adding a sound card to your system is never as simple as you'd imagine. It won't instantly upgrade all your software to multi-channel CD quality output, but with a bit of coaxing and a good CPU it might just meet your expectations,

> **So, what we've got here is a sound card solution for a basic A1200. It's not the first but it's definitely the best.**

which I know are very high. For a quick idea of what you can do with the hardware in practical terms, take a look at the software performance box.

One of the biggest problems for any A1200 sound card developer has always been how to interface it with the computer. Aside from the trapdoor slot, there aren't an awful lot of ways you can get enough data in and out of the computer to sustain a CD quality audio stream. The PCMCIA slot is used by most people as a SCSI interface so that's not very practical. You'll need RAM and an accelerator card in your trapdoor slot to be able to do anything useful, so that leaves the inadequate ports at the rear, and the mysterious internal 'clock port' (see the box for more on that). Prelude 1200 takes the clock port approach, which means you'll need to get your screwdriver out.

HARDWARE

Let's talk about the hardware. It's actually split into two parts; the digital card and the analogue card. The digital part sits very snugly over the clock port connector on the A1200 motherboard. A ribbon cable connects this to the analogue part (insulated with a ferrite 'buckle' on the cable), which occupies the area just inside the spare blanking plate on the back of the computer, next to the mouse and joystick ports. Audio ins and outs are then presented along the back edge of the machine.

The four stereo mini-jack sockets offer a line level output, two line inputs and a mic input. You can use one of the inputs to mix your old Amiga audio with

INSTALLATION

Even though a manual with better pictures would help, installation of the card is nothing to worry about. Removing the case and propping up the keyboard, taking care not to yank out the keyboard connector ribbon, will reveal the motherboard. If you've been good to your A1200 it should still have its RF shielding on it. The clock port header is found beneath a small section of shielding, the removal of which makes room for the digital card. It's a very tight fit and might require a bit of Uri Geller work on the surrounding shielding to get it in.

With any luck, the instructions you get will have a card and pictures that match, which makes connecting the two cards that bit easier. The analogue part goes in without a struggle and is secured with a little nut and bolt through an existing hole in the underside of the A1200 case. That's all there is to it. If you're lucky, unlike me, you might also get a guide as to which audio connection is which.

Once you've got it all in place and put the case back on, it makes a remarkably neat addition. If you have an internal 3.5" IDE hard disk you might need to move that slightly to one side, being careful to insulate it against shorting out on anything nearby. Otherwise it should all go back together without any problems, with no untidy wires hanging out.

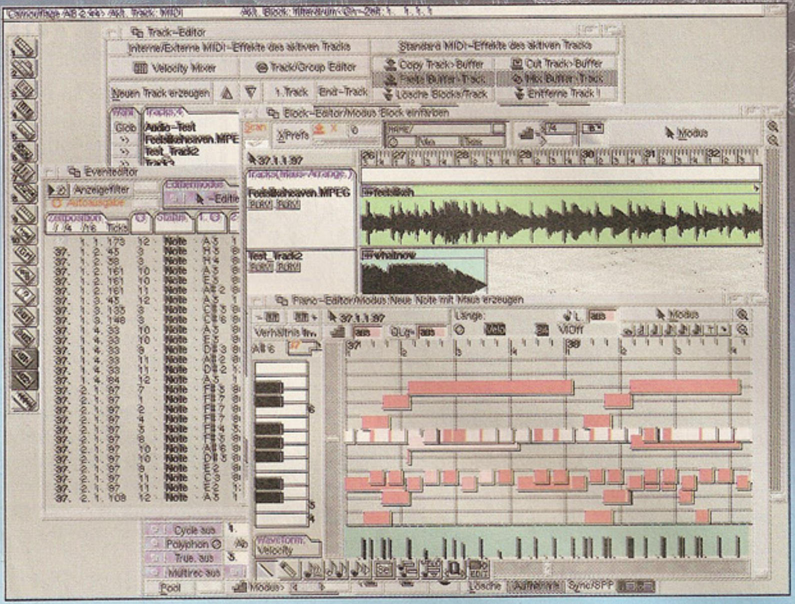
It's worth bearing in mind that by installing the Prelude you're increasing the demand on your power supply and raising the internal temperature of your A1200 too, although so far I haven't experienced either heat or power problems (my A1200 is powered by an old A500 PSU).

THE CLOCK PORT

You could be forgiven for not even knowing your A1200 had a clock port. In fact, yours might not have one at all. If it does, you'll find it under a matchbox-sized piece of RF shielding in the middle of the motherboard.

It seems Commodore and Escom had different ideas about this, so some A1200s have the wrong pins connected, some have twice as many pins and others have none at all. Fortunately Eyetech are confident that they can fix yours, however it came out of the factory.

It's taken a while for developers to catch on to the potential of this secret little expansion port, but if you already have something taking advantage of it, once again Eyetech advise you to give them a bell and they'll do their best to sort something out.



If you speak German then your luck's in because there's direct support from Prelude 1200 for *Camouflage*, the promising MIDI and hard disk audio sequencer. Fortunately, an English language version is in the works too.

the Prelude output. An alternative "L" plate is available for tower-converted systems which mounts the ins and outs at the rear of the case.

It's a 16-bit card capable of 14 different sampling and playback rates, including all your favourites (32KHz, 44.1KHz and 48KHz), right up to 64KHz. It's also a 'full duplex' card, which means it can record and play

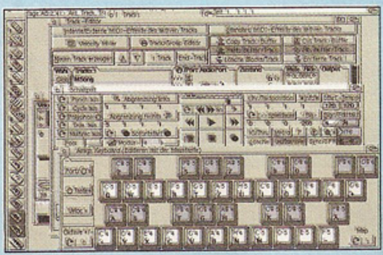
> **Sound quality is excellent, both in terms of real-time playback and the quality of the effects processing.**

back at the same time. Aside from that it doesn't have any other major tricks up its sleeve, so there's no wavetable synthesis or DSP effects.

It doesn't seem to be overly noisy, although when you've got something in such close proximity to a floppy drive at one end and a hard drive at the other, there'll always be some unwanted whirring and buzzing in the background. A tower system with more room between the components would help.

SOFTWARE

You get a good selection of software on the accompanying CD. *AHI* (the retargetable audio system) is there which means you can use your Prelude in conjunction with all kinds of audio applications, including loads of small player and recorder utilities, plus big apps like *Sound Probe*. While *AHI* is far from an ideal solution, mainly because it can't offer any specific support for different features of each card, it does at least mean you're not stuck with software that was written specifically for your hardware. Also, German-speakers will like the inclusion of the German edition of *Camouflage AB*, a MIDI sequencer with its own Prelude support.

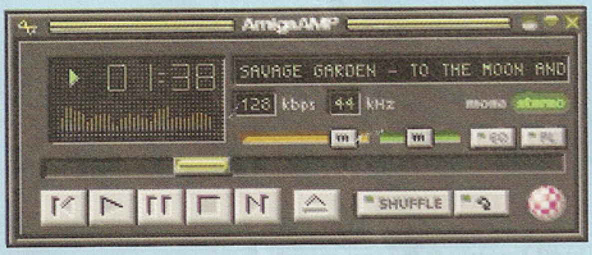


A lot of the 100Mb of stuff on the CD is accounted for by a few enormous samples which can be spooled and used as test sounds. The Toccata emulation library required to use the hardware with *SoundStudio* wasn't included on my CD. If you don't have it, call Eyetech.

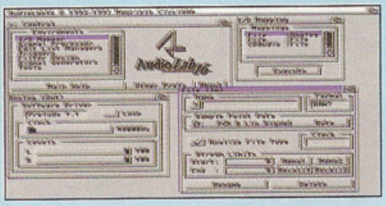
Prelude should also work with the new *ARTAS* system when it's available. *ARTAS* is a generic data-streaming system which can be made to work as a retargetable audio interface, like *AHI*.

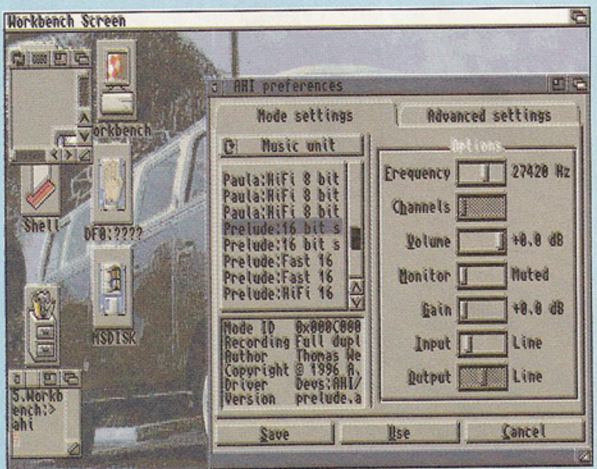
As far as Prelude's developers are concerned, the main attraction on the software front is *Samplitude Opus* (it's a '*Lite*' version here). This is a hard disk recording and editing system, aimed at preparing audio CD data. To that end it likes to work with big hard disk audio projects and allows you to mix multiple tracks of audio down into a single audio file. Sound quality is excellent, both in

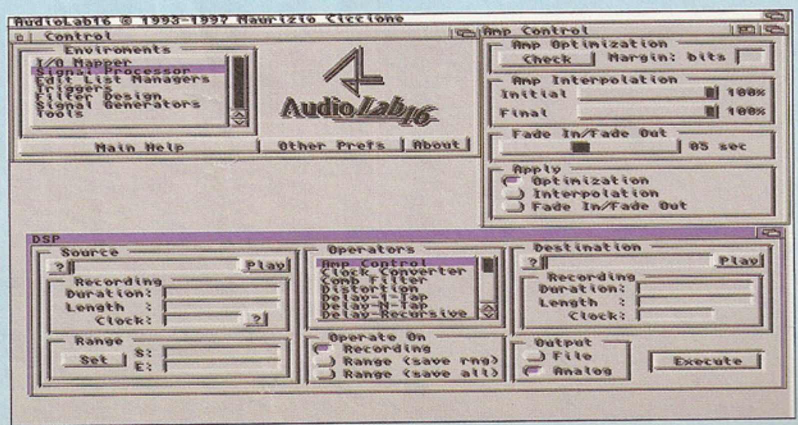
Continued overleaf ➡



AmigaAMP, the MP3 audio player, can be channelled through the Prelude 1200 via *AHI* for high quality playback of those increasingly popular MP3 files.



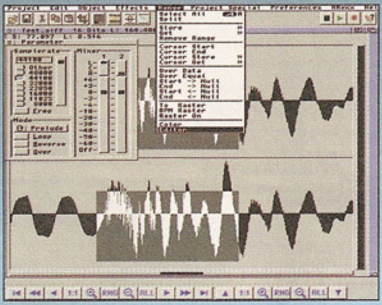


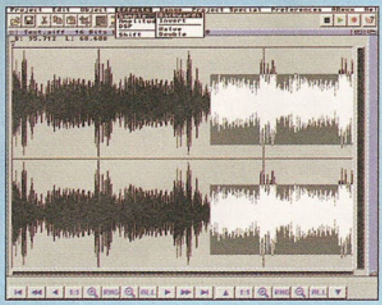


More direct support comes in the form of the quirky but useful *AudioLab16*, which is also included on the accompanying CD-ROM.

terms of real-time playback through the Prelude and the quality of the effects processing.

Samplitude doesn't have as many effects on offer as *Sound Probe*, but it prides itself on its internal over-sampling and anti-aliasing filters. These take time but lead to cleaner results from re-sampling and mixing operations. This was reviewed quite a while ago in *Amiga Format*, so check *AF102* for the full picture.

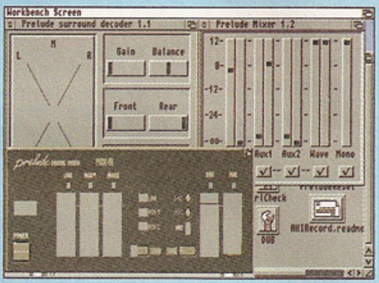




The best performance you're likely to get from the hardware is through *Samplitude*, the hard disk audio and CD preparation system. It comes with direct support, leading to clean and clear sound with a low CPU overhead.

PRICING

You'll need the fastest processor you can buy to get the best out of any sound card. At the moment, support for PPC cards is sparse in audio applications. This means you should really get yourself an '060 to do it justice. Compared to other options for a non-Zorro A1200, this is miles ahead of anything that's gone before, but watch out for our review of the Melody 1200, coming soon.



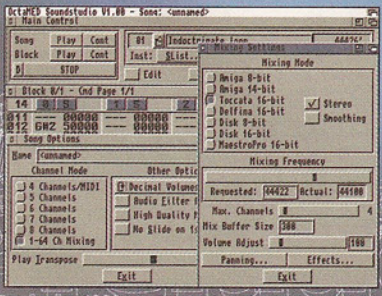
Complementing the big guns is a number of smaller software tools and utilities, including a surround sound decoder, a software mixer for setting input and output levels and the Prelude Tapedeck.

It's reasonably priced considering it'll have a relatively short production run, as opposed to being made in huge, cost-effective quantities. While it does seem a lot to pay for what appears to be a simple 16-bit DAC, in Amigaland you're not going to pick up anything much cheaper when you consider the development, manufacturing and retail costs which are involved.

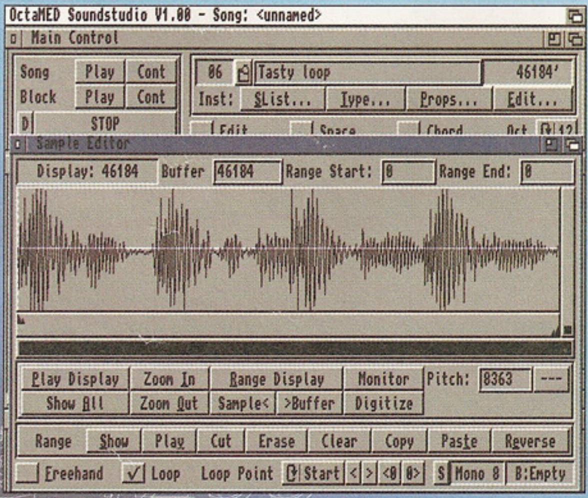
CONCLUSION

As ever, there's room for improvement in presentation, but once you've got it working you'll be impressed. It would have been nice to have had digital inputs and outputs though, especially as they're becoming increasingly popular on consumer hi-fi equipment.

It isn't likely that Prelude 1200 will solve all of your audio problems, but then it's doubtful that any A1200 sound card ever will. Even so, if you're into audio in a big way, it'll soon become an essential part of your system.



For the first time ever, you can now use *OctaMED SoundStudio* in 16-bit stereo on an A1200, thanks to the emulation library that fools the software into thinking you have a Zorro Toccata sound card.



USE YOUR PRELUDE 1200 WITH...

SAMPLITUDE OPUS

There's direct support for Prelude 1200 from within *Samplitude Opus*, and the version that comes supplied with the hardware (*Samplitude Opus Lite*) is pre-configured to work with it so there's no messing around with libraries or drivers to contend with. Output from *Samplitude Opus* through the card is crystal clear. The only trouble you might have is if you ask too much of your system with large hard disk audio projects, in which case you'll need a fast (preferably SCSI) interface and a good CPU (preferably an '060).

OCTAMED SOUNDSTUDIO

Compatibility with *SoundStudio* comes via a library that fools the software into thinking that your Prelude 1200 is a Zorro Toccata sound card. With this installed, you can select Toccata from the Mixing options to route your 16-bit output through Prelude. Performance is based on the speed of your CPU. You'll need at least an '040, but preferably an '060, to feel the benefit, as the quality available with an '030 is arguably no better than you get with Paula. One vital point to note (that took me a week and a half to find out) is that in order for this to work, you must rename or remove the file called "toccata" in your devs/audiomodes drawer. This is the sort of thing a user must be told in the documentation.

AHI APPLICATIONS

This includes *Sound Probe, SoundFX, PlayHD, Play16, DIGI Booster* and some games. The quality you get will differ depending on what happens to your sound data before it finds its way to *AHI*. For example, the quality you get when replaying a single sample from *Sound Probe* is superior to that of a multi-track *DIGI Booster* composition for the simple reason that *Sound Probe* is merely passing on a 16-bit data stream straight from memory, whereas *DIGI Booster* is mixing lots of samples at different rates into one 16-bit data stream, a by-product of which is mixing noise at the output frequency (it sounds a bit tinny and crunchy).

CAMOUFLAGE AB

At present, *Camouflage AB* is only available in a German language version, but work is in progress on the English translation. It's a very powerful-looking MIDI sequencer which has support for Prelude 1200 via the Prelude.library. Sound quality should be good, although until the English translation appears I can't tell you much more than that. We'll let you know when it's here. An older English version is still available from Aminet (mus/midi/camouflage149E.lha), as is the latest release (mus/midi/cam_deAB.lha) which has two updater patches in the same destination.

AUDIOLAB 16

The version you get isn't the most friendly or flexible bit of audio software around, but it does have its own Prelude1200 driver so output is clean and doesn't demand lots of processor power. *AudioLab 16* has some unique sound editing features which will probably ensure it gets an airing once in a while when nothing else is up to a specific job. However, its inability to import 8SVX samples is infuriating.

SUPPLIER: Available from Eyetech and made by ACT in Germany.
PRICE: £129.95 (BVision, IDE Flyer, tower-compatible kit £144.95).
REQUIREMENTS: A1200, CD-ROM, HD.

Pros and Cons

- + Works with a desktop A1200.
- + Full duplex operation.
- + Lots of software support.
- − Setting up can be awkward.

OVERALL VERDICT:
Easily the best A1200 audio expansion we've seen so far.

90%

3D Sound Box

Simon Goodwin tunes up ***Epic***'s budget 3D Sound Box.

AFCD38:-In_the_mag-/ and audio tracks

ON THIS MONTH'S CD

Example Paula output with and without 3D processing, and the Toshiba sound processor datasheet.

The Maxxtro 3D Sound Box is a gadget that fits between your Amiga's stereo output and your amplifier, processing the analogue stereo audio stream to give a 3D effect. You can hear the results for yourself on *AFCD38*, and study the datasheet for the Toshiba TA8173AP chip that does the business, in PDF format, on the data partition of the CD.

The only control on the box is a blue recessed button, labelled 'Surround On/Off'. It passes sound through unchanged until you press the button. The chip then cuts in, boosting the signal levels by 8dB.

Most things sound superficially better when turned up suddenly, so this hefty jump flatters the Sound Box. Stripped of this, the effect is a lot more subtle, but it's still quite obvious.

> "The tunes are unexceptional but clearly demonstrate the potential of the Sound Box on raw Amiga audio."

Technically, the box performs 'comb filtering', cross-coupling the original and delayed difference signals between left and right channels. This boosts and suppresses adjacent frequency bands, like a static variation on the 'flanging' effect on many pop records, notably Siouxie's hit remake of John Lennon's *Dear Prudence*. It takes some imagination to describe this as a '3D' effect; it certainly adds depth to raw sample replay, but the results on professionally mixed CD tracks may be disappointing, giving a thinner and obviously processed sound.

Epic's pink demo disk contains six short tracker modules and a rudimentary 'play and rave' player which runs directly when you boot the disk, but it has no Workbench interface. The tunes are unexceptional but clearly demonstrate the potential of the Sound Box on raw Amiga audio.

HARDWARE

The plastic box is off-white and occupies about the same space as eight floppy disks, measuring 100x80x30mm. Three sockets on adjacent sides carry DC power in and signals in and out. A nine-volt 200mA adaptor with a built-in UK mains plug supplies the necessary current via a standard concentric power plug. Two red lights on the front indicate power and 3D processing.

The audio signals are routed through a pair of 3.5mm stereo jack sockets, as commonly used on Walkman headphones, although these are line level signals and need an amplifier to make them audible. Two audio cables are provided.

By default you get one lead that links two phono plugs, matching the Amiga's back-panel Paula audio outputs, to the 3.5mm input socket on the Sound Box, and a straight cable linking two 3.5mm stereo plugs for the output circuit. This jack to jack lead is unlikely to be useful in an Amiga setup, but Epic ship it anyway as it's bundled by the manufacturers of the box.

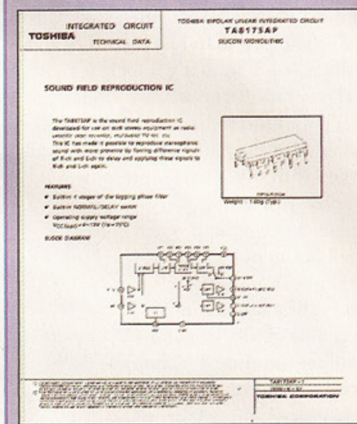
If you own an external speaker unit made for a Walkman, portable CD player or PC sound card, you should be able to plug the lead from that directly into the Sound Box output. If your existing set-up plugs directly into the Amiga, you'll need an adaptor to get from the stereo jack to a pair of phono sockets.

After discussions with *Amiga Format*, Epic have agreed to include a suitable lead for those who indicate this requirement when they place their order.

Given two metre-long leads, each with a pair of phono sockets and plugs at each end, the box can easily be inserted directly into an existing Amiga sound setup.



The Sound Box comes with a collection of Paula modules on disk.



PDF specifications for the TA8173AP 'Sound Field Reproduction IC' are included on this month's AFCD.

SUMMARY

The 3D Sound Box does a good job of mixing left and right channels of Amiga sound so the two channels still sound different but so that effects formerly confined strictly to one side of the stereo field are audible through both speakers. If you're bored with stark Amiga stereo, this is just the thing to give games and tracker modules an extra layer of ambience. I wouldn't use it all the time, but it certainly makes an interesting change.

SUPPLIER: Epic Marketing, (0500) 131486
http://www.epicmarketing.ltd.net
PRICE: £19.99
REQUIRES: Any Amiga and compatible amplifier

Pros and Cons

- \+ Makes Amiga stereo sound more natural.
- \+ Interesting fixed delay and filtering effect.
- \+ Works with all programs; no special setup required.
- − Level jumps require manual correction.

OVERALL VERDICT:
A very cheap way to spice up your Amiga stereo.

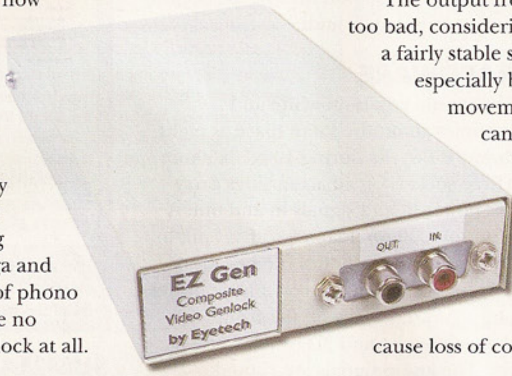
83%

Eyetech Genlock

Nick Veitch locks his gens with this video trickery.

The Amiga has long been a favourite with desktop video enthusiasts because of the excellent graphics software available for it, and because it can easily create a standard PAL or NTSC video signal. To do a little more than just record Amiga graphics you'll want a genlock, which overlays graphics onto a live video feed.

There used to be many genlocks available for the Amiga (though not all worked with the A1200), but now there are just a few. Eyetech's new model is aimed at the budget market, with minimal features at a knockdown price. The genlock itself is cased in a slimline 3.5" floppy drive case and only has three connectors – one 23-way plug which connects to your Amiga and a composite in and out pair of phono sockets at the back. There are no external controls on the genlock at all.



Hidden in this old floppy drive case is a real-life genlock.

As with other genlocks, it monopolises your RGB port so it's impossible to connect a monitor to it. You'll have to monitor your Amiga's output via the composite out on the genlock. The composite in is used to connect to a video source such as a camera, camcorder or VCR. The standard composite signal is then mixed with the Amiga display and is output on the second phono connection.

The output from the EZ-Gen isn't too bad, considering its price. You need a fairly stable source video stream, especially because dramatic movements and high contrast can exacerbate "screen tear", where the top left of the screen appears distorted. Such effects can cause problems with the recording of an image, or at least cause loss of colour or sync failure.

The Ez-Gen also lacks any extra controls, such as inverted keying or a mix mode for fading in and out the video or Amiga graphics. However, that's hardly very surprising considering just how cheap it is.

It's a long way from broadcast quality, but if you just want to fool about putting scrolling messages and titles on your home videos, this is about the cheapest kit you can get.

SUPPLIER: Eyetech (01642) 713185
PRICE: £69.95
REQUIREMENTS: Amiga with free video port.

OVERALL VERDICT:
Needs a very good video source for acceptable results, but it's cheap.

80%

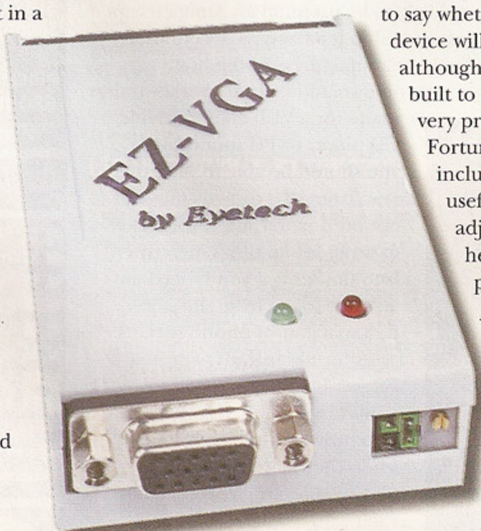
EZ-VGA

Nick Veitch doubles his scans with, oh, I expect you'll have guessed…

This is the latest refinement in a rash of flicker fixer and scandoubler add-ons for the Amiga. This external model connects to the standard video out port of the Amiga and has a 15-way, D-Type, VGA-standard connector on the rear for connection to a VGA monitor.

The device is designed to enable you to display all your standard Amiga video modes on a low cost VGA monitor. It does this by doubling the horizontal frequency of the 15KHz modes which the Amiga uses for its low resolution displays, commonly used by video applications and games.

In the past some people have had difficulties using such devices. Because not all Amigas were created equal (there's a vast difference between the outputs obtained on a selection of A1200s, for example), it's been difficult to say whether a particular device will work. Also, although VGA monitors are built to a standard, it's not a very precise one.



It does protrude somewhat, but at least the casing is fairly sturdy.

Fortunately, Eyetech have included a number of useful jumpers and an adjustment screw to help you get the best performance. The jumpers can set either a negative going or positive going phase signal for your monitor to lock on to, so you shouldn't really have any trouble.

This EZ-VGA also includes a full Bypass mode so that signals above 15KHz pass through undisturbed. This does mean that some of the more unusual screenmodes won't be corrected. DblPAL and DblNTSC won't work any better – they may work on some VGA monitors as they fall just a touch short of the standard 31KHz. Super 72 also remains unaffected and is unlikely to work. This version is upgradable to flicker fixed operation, which will make using all those old CAD and 3D programs a lot easier.

The flicker fixer effectively buffers the fields of the video signal to display them simultaneously. Again, the flicker fixer will only work on 15KHz modes because higher frequency signals are passed through the device, so it won't mean you'll never see a flickering screen again. In terms of quality, the EZ-VGA comes out quite well. A certain amount of fuzziness is perceptible on larger monitors (I tested it with a 17" Belinea), but at least you can see the screens.

SUPPLIER: Eyetech (01642) 713185
PRICE: £69.95
REQUIREMENTS: Amiga with free video port.

OVERALL VERDICT:
A useful addition to the range of Amiga VGA adaptors.

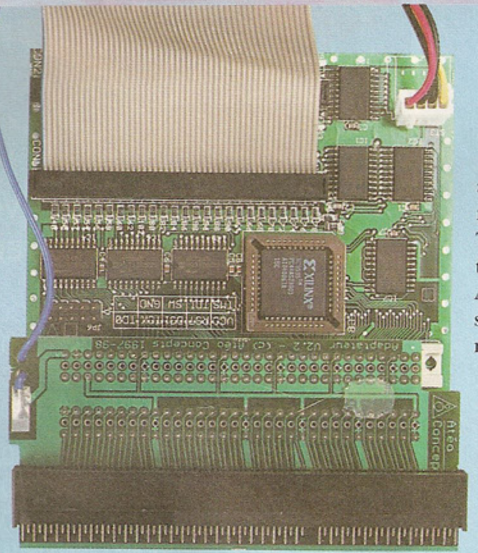
88%

Atéo Tower *Expansion*

Simon Goodwin tests an ingenious A1200 expansion alternative to ***Zorro***.

Last summer, French firm Atéo demonstrated the prototype of their radical A1200 expansion system at the World of Amiga show. This forswears Amiga Zorro standards for a 'proprietary bus system with ISA compliant modes'. In other words, it's an adaptor to use 16-bit Industry Standard Architecture PC cards with a towered-up Amiga.

ISA cards are no match for 32-bit Zorro 3 expansion on A3000 and A4000 systems, but that's a very expensive proposition on Amigas not designed with it in mind. The Atéo proprietary bus implementation squeezes extra speed out of ISA, giving it more bandwidth than Zorro 2.



Plug one of these onto your A1200's expansion ports and you're half way there.

You'll need an accelerator and extra RAM to make serious use of AtéoBus. The interface plugs into the trapdoor slot of a reboxed A1200, with a pass-through suitable for some, although not all, accelerators.

Two broad ribbon cables run to four ISA slots on a separate board, also conveying power back to the Amiga. The ISA cards occupy the 16-bit Zorro 2 and PCMCIA expansion area, ruling out cheap 68020 and 68030 cards limited to 8Mb in that space.

Timing problems stop Apollo 1230s and early 68030 Blizzards from working. Your safest bet would really be an Apollo or phase 5 68040 or 68060 accelerator.

The AtéoBus slots suit 16-bit PC cards that don't require direct memory access (DMA). So far, the only cards with Amiga drivers are Pixel64, a Cirrus Logic graphics card with 2Mb of 64-bit local memory, and some serial and parallel adaptors.

Atéo say there's a prototype Ethernet adaptor working on their Amiga network, but licensing problems mean it isn't available for review.

CONTACTS

White Knight Technology.
PO Box 38, Ware, Herts, SG11 1TX, UK.
☎ 01920 822321, visit:
http://welcome.to/white-knight

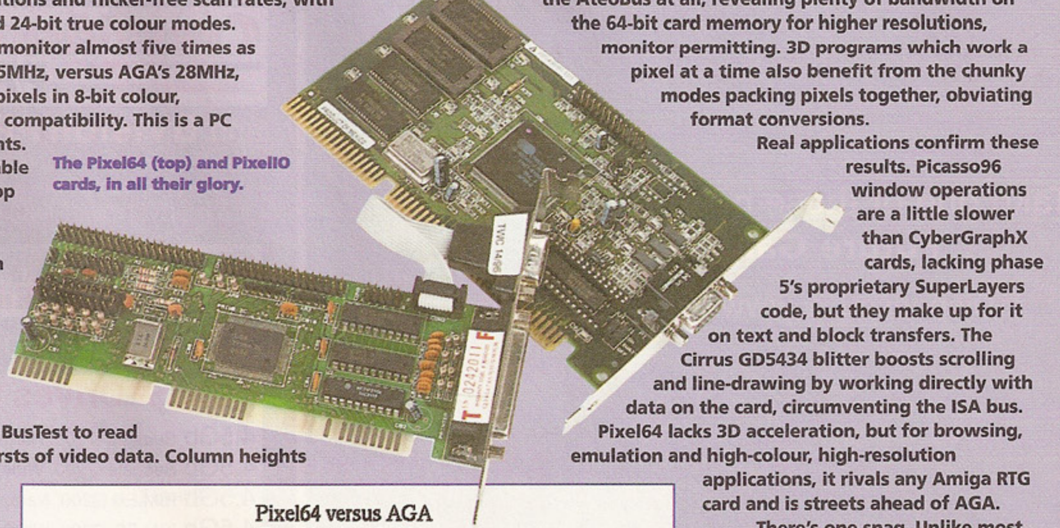
Atéo website:
http://www.ateoconcepts.com/eframe.html

PIXEL64 GRAPHICS AND MULTI IO

The raw performance of Atéo's Pixel64 rates somewhere between PicassoII+ and PicassoIV. It runs rings around AGA in 256-colour modes, supporting higher resolutions and flicker-free scan rates, with photo-realistic 16-bit high colour and 24-bit true colour modes.

This board can chuck pixels at a monitor almost five times as fast as AGA. The top pixel rate of 135MHz, versus AGA's 28MHz, allows resolutions up to 1280x1024 pixels in 8-bit colour, refreshed at 75Hz, though it lacks TV compatibility. This is a PC card, with corresponding requirements.

You'll need a large monitor capable of scanning at 64KHz to access the top resolutions. A worst-case 31KHz double-scanning VGA-type has a flicker-free limit of 640x480, albeit in true colour, but even the nastiest SVGA multiscan manages a flicker-free 800x600 pixels, the comfortable minimum for many PC-generated web pages, at 35KHz.



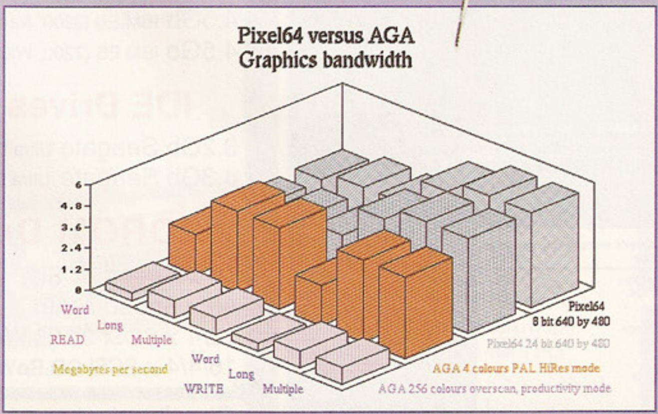
The Pixel64 (top) and PixelIO cards, in all their glory.

The 3D ProCalc chart contrasts the speed of AGA and Pixel64, using BusTest to read and write words, long words and bursts of video data. Column heights indicate the transfer speed in megabytes per second.

The first line of boxes shows AGA at its limit, displaying 400K pixels at 50Hz, in overscan SuperHires or Productivity mode. This leaves only 1Mb per second of bus bandwidth, at best.

The theoretical upper limit is 7Mb per second, but you only get that with a 68020 or 68030, using low resolution or few colours. The second set of columns shows the best you can expect from AGA with a 28MHz Apollo 68040, driving a default 4-colour PAL Workbench.

Contrast this with the Pixel64 results, in the right hand rows, for 8-bit 256 colour and 16 million-colour 24-bit modes, both at 640x480 pixels. Tripling the data fetch rate hardly slows the AtéoBus at all, revealing plenty of bandwidth on the 64-bit card memory for higher resolutions, monitor permitting. 3D programs which work a pixel at a time also benefit from the chunky modes packing pixels together, obviating format conversions.



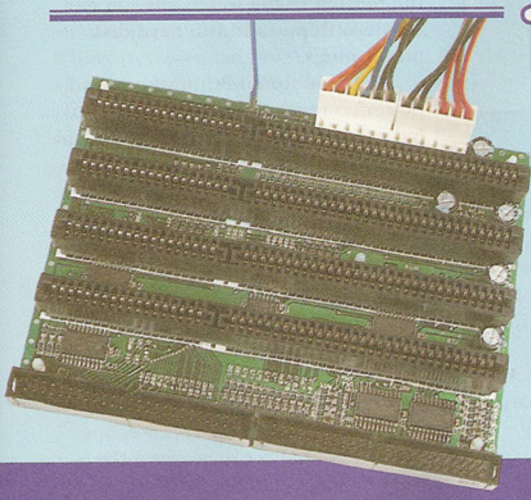
Real applications confirm these results. Picasso96 window operations are a little slower than CyberGraphX cards, lacking phase 5's proprietary SuperLayers code, but they make up for it on text and block transfers. The Cirrus GD5434 blitter boosts scrolling and line-drawing by working directly with data on the card, circumventing the ISA bus. Pixel64 lacks 3D acceleration, but for browsing, emulation and high-colour, high-resolution applications, it rivals any Amiga RTG card and is streets ahead of AGA.

There's one snag. Unlike most Amiga-specific RTG cards, Pixel64 has no pass-through for the Amiga's native video. Atéo intend to make an adaptor, but so far they're just soliciting pre-orders. Until this is available, at extra cost, you'll need two screens to use Amiga-specific software, particularly games, that don't support RTG.

For months, Pixel64 was the only expansion useable on AtéoBus, leaving the extra three slots redundant, but at last some serial and parallel boards have appeared. These are standard PC cards, pre-

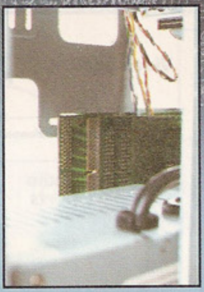
They promise a 16-bit SoundBlaster-compatible audio card with integrated mixer and FM synth, but they have yet to start developing this; it'll need software-intensive drivers in the absence of ISA DMA. This explains why passive ISA buses like the Golden Gate 2 bridge still lack sound card support, years after release.

> *"They promise a 16-bit SoundBlaster-compatible audio card with integrated mixer and FM synth…"*

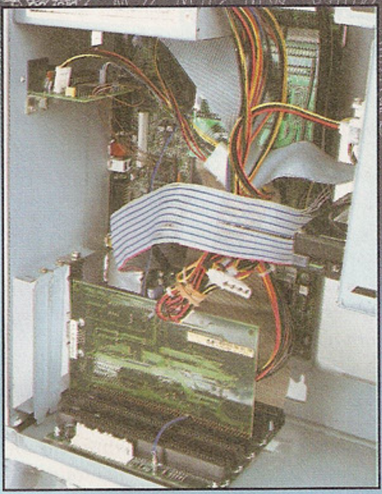


The Atéo bus board itself. As you can see it will take four ISA cards.

These plans are laudable but require custom software drivers. For now though, retargetable graphics (RTG) must be the primary reason for buying the AtéoBus; it comes with reliable *Picasso96* drivers which put it in the mainstream of Amiga RTG, alongside CyberVision and Picasso cards.



You can see the expansion card as we look down into the top of the tower.



SHOWS PROMISE

Atéo have fallen into the usual trap for a hardware company – treating software as an afterthought. With the exception of Pixel64 and its fine *Picasso96* implementation, AtéoBus has great potential for coders but falls short of users' reasonable expectations.

Atéo are eager to encourage programmers to write drivers, but like most small developers they lack the cash to fund this work up-front. They'll need to ship a few systems on special terms to expert coders before they'll have a serious rival to Zorro expansion or trade-ups to a big-box Amiga.

There's basic developer information on their web page, and on next month's *AFCD*, but you must still know a lot of PC arcana to bring an ISA board to life.

At present, AtéoBus offers good graphics with the potential for further expansion. Ethernet will make it substantially more attractive, but just think about how much better it could have been given sound card, HD floppy and extra IDE support…

Continued overleaf ➡



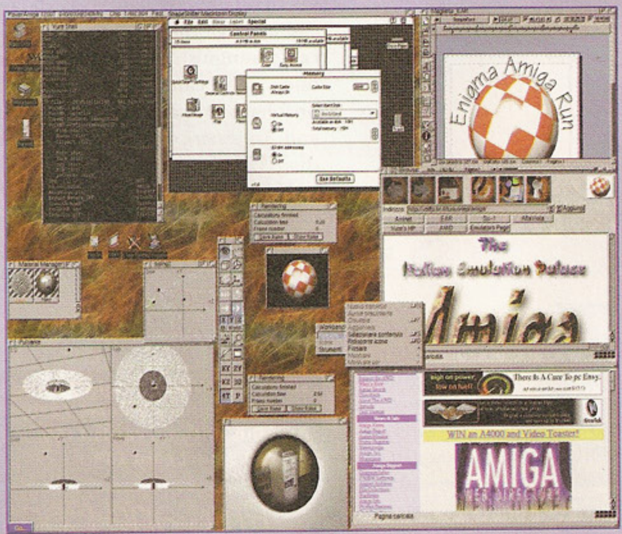
The Pixel 64 allows for all sorts of resolutions. Here it's showing the difference between some of them.

configured to avoid conflicts with Pixel64. We tested the best-value three-port version; the manufacturer's web page also lists parallel and serial adaptors with one and two ports. The driver supports up to 10 of each, but in practice you'd run out of places to put them, bus and interrupt time, first.

The Amiga drivers are protected by a keyfile which you must obtain after purchase by sending registration details to Atéo, either by snail or email. Unregistered users are limited to a single serial port at just 9,600 baud. This should persuade people to buy the card from Atéo, rather than a PC box-shifter, which is fair enough as good drivers cost a lot more than generic circuitry.

AtéoIO 1 is a combination twin serial and parallel interface based on a buffered StarTech controller, similar to that used on HyperCom, IOblix and GVP IO Extender cards. The hardware includes PC floppy, IDE and game port connectors, but these are ignored by the Amiga software drivers.

Unfortunately, Atéo's drivers are half-baked. When we contacted Atéo customer support about this, we were told, "This is a serious trouble. In fact the device works but after a very little time of full speed, it crash. We think of a design trouble on the ateoser device. The first version was done by a trainee; we have someone working on it but basically he must rewrite the complete device, so this will take time." (sic)

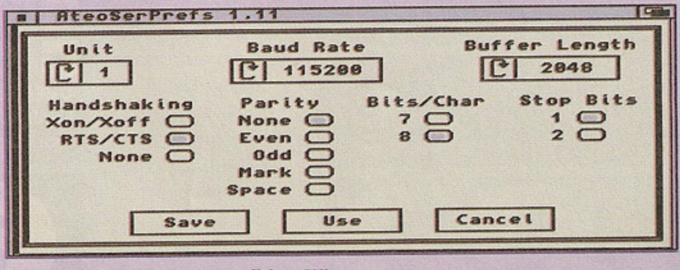


A packed Workbench at Pixel64's top resolution.

There are no mountlists or DOSdriver icons for the low-level code, so you can only use them with programs that accept a device name and unit number, like *Term* or *SerMouse*. In theory, Commodore's general-purpose Workbench 3.1 port-handler supports these add-on devices, but you'll have to roll your own configuration. Rival boards come with handlers and mountlists for Shell usage, as well as basic hardware drivers. You do get GUI front-ends for the serial and parallel port preferences, in order to set the protocol and transfer rate, something which IOBlix lacks.

The parallel preferences include an Extended Parallel Port option, ready for cheap PC parallel scanners and Zip drives, but no suitable drivers.

"Right now, we have nothing to use to EPP of our parallel board," Atéo conceded, and there's no PARnet or ProNet option either.



Atéo provide IO preference-editing GUIs.

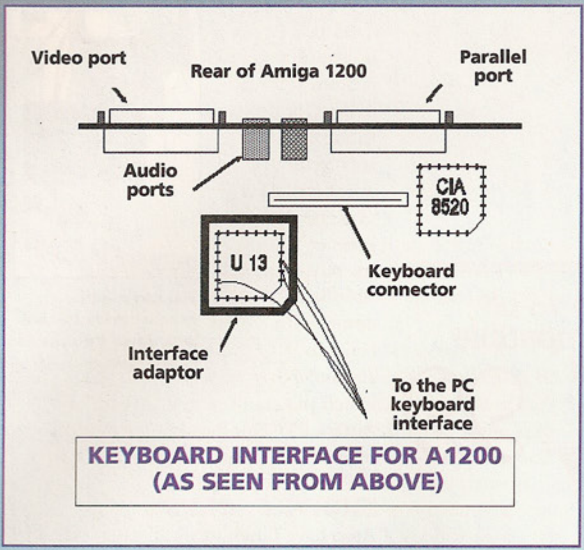
ATÉO TOWER

Our WoA show report last summer gave details of the AtéoBus, but there's a big difference between wowing the crowds and shipping complete systems.

We've actually tested the same system as our erstwhile rivals, only with software fixes and the first of the promised add-on boards. We found some mechanical problems with the slots and were told that current Atéo towers sport card brackets at both ends, not just the top, and include screw holes for all four slots.

The photos show that there's no way to fit the fourth card in the review system. The back panel has three vacant holes beside the Amiga port cutouts; the slot expansion area had a razor-sharp spike of swarf on its inside edge, which should surely have been filed down before delivery.

The Atéo Tower is a PC model with an adaptor for the front-panel lights, plus a power supply remounted at right angles to accommodate the A1200 motherboard alongside. The custom floppy drive has the usual 880K capacity but its activity light is dormant. Instead, the tower's turbo light flashes when the floppy is accessed. You could reuse your A1200 drive if you improvised a front bezel.



Fitting Atéo's keyboard interface inside the A1200.



The impressive-looking Atéo Tower.

ATÉO KEYBOARD

The serial keyboard interface is good, given a quality PC keyboard. It worked well, apart from an initial tendency to signal one spurious 'i' keypress when used with my black IBM keyboard, a snip at £4.50 from CPC. It requires a 105-key 'Win95' keyboard as the Windows keys stand in for Amiga ones.

It supports the Amiga keyboard reset, unlike most rivals, plus key combinations that confuse many other controllers, which are generally inferior to the Amiga controller. Atéo say, "Usually very bad PC keyboards can manage three keys and good ones can distinguish eight or nine keys at once." This can cure PC keyboard problems that occur with *MED*, *ADoom* and *Ant Attack* emulation, confused on the A1200 by combinations of qualifier keys.

The keyboard interface screws onto the back panel, presenting a 5-pin D socket. It connects to U13, the A1200 keyboard controller. Our model had flying wires soldered directly to the chip, but the familiar 'upside-down PLCC socket' kludge is used on production units.

POWER USERS

Atéo's web page promises a 200W supply and White Knight invoiced us for a 250W one, but the low-noise model shipped was rated at 230W. This is ample for the motherboard, AtéoBus and half a dozen typical drives. You'll need cable splitters to power up all the bays – three 5.25" and three 3.5", plus more space at the bottom of the tower – as you get only two floppy and two hard disk power plugs.

Two additional PC motherboard power connectors fit on the AtéoBus backplane, with a separate flying lead for the negative supply, vital for Amiga sound. If you buy the tower without the bus, you'll have to solder connections directly to the motherboard or retain your original Amiga supply, dedicating the tower PSU to extra drives.

TOWER VERDICT

The Atéo Tower is expensive compared to an empty PC case, but not unreasonably priced given the work to adapt it to the A1200, which was never designed for rehousing. DIY enthusiasts might favour a PC desktop tower case, designed for four horizontal slots, if the A1200 motherboard could be squeezed alongside the bays and power supply, but they'd be unlikely to get such neat results. You're paying for the new back-panel with cutouts for the Amiga connectors, the keyboard interface, LED adaptors and instructions, and these don't come cheap.

AtéoBus

SUPPLIER: White Knight Technology
PRICE: AtéoBus + Pixel64 £239, AtéoBus with no cards £159, AtéoIO 3 port card £49.

Pros and Cons

+ Solid *Picasso96* implementation.
+ Impressive Pixel64 performance.
- IO card drivers need developing.
- No support for other ISA cards.

OVERALL VERDICT: Looks promising but needs more work done to it.

61%

AtéoTower

SUPPLIER: White Knight Technology
PRICE: Tower with keyboard interface £139, Atéo Concepts 880K disk drive £30.

Pros and Cons

+ Fully adapted for the A1200 motherboard.
+ Unusually good serial keyboard interface.
- Review unit was dented and poorly finished.
- May require soldering to the motherboard.

OVERALL VERDICT: Practical, but pricey.

66%

Serial Mouse Pen 2

Simon Goodwin tests ***Epic***'s latest alternative pointing gadget.

MousePen2 is another replacement for the Amiga mouse, based on a PC peripheral with a serial port adaptor and driver software compatible with system-friendly Amiga applications. It plugs into the Amiga motherboard serial port or into add-ons like RBM's IOBlix (reviewed last issue), HyperCom, Multiface or GVP's IO Extender.

MousePen2 stretches the conventional mouse into a new configuration, arranging the ball and buttons in a line along the body of a chunky plastic pen. You use the gadget as you would a pen on paper. Sliding the point around rolls the ball like a mouse ball or inverted trackball, updating the position of the pointer on your screen.

The familiar *MouseIt* software is supplied on a pink 880K floppy disk. This package, reviewed alongside SpeedMouse Mini last year (*AF117*), now includes the 'non-commercial' *NewMouse* driver, implementing Mouse Wheel and Logitech support as well as the standard Microsoft serial mouse protocol. Once again I plumped for Patrick van Beem's *SerMouse* which worked faultlessly with IOBlix and which consumed a mere 3K of my Amiga's memory.

The pen has a lightweight plastic body with a bulge at the end to accommodate a 10mm translucent ball, with two buttons in line a little further back which work like conventional left and right mouse buttons. A couple of metres of flexible cable lead to a nine-pin, D-type socket.

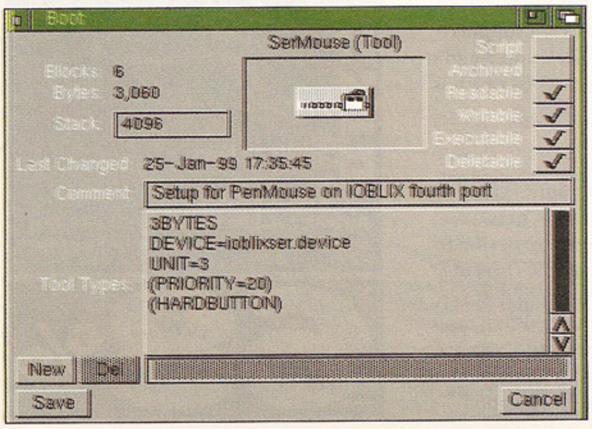
PC mice typically use non-standard serial connectors which resemble Amiga mouse or joystick plugs but work like cut-down 25-way RS232C serial connectors. IOBlix adopts this non-standard, accepting the MousePen directly, without needing an adaptor. The Amiga itself sticks with the 25-way, D-type serial port which was an established standard until PC makers started to mess with it.



You might want the Levi's 501 expansion module to get the best from this peripheral.

The MouseIt package includes the vital D-type adaptor from 9 to 25 pins, this time low-profile rather than the triangular wedge that was shipped with the SpeedMouse.

> *MousePen2 stretches the conventional mouse into a new configuration, arranging the ball and buttons in a line...*



SerMouse settings for a PenMouse on IOBlix port 3.

ERGONOMICS

Ergonomically, MousePen2 takes some getting used to. The cable is heavier than the pen itself, emerging from the top end and tending to tip and twist the pen. The pen only works if the ball at its point is resting on a flat surface. The pen body isn't round, which would make it hard to orientate correctly, but instead has three flat surfaces and a curved underside, with an average diameter of 18mm.

Held straight between forefinger and thumb, you can't reach the buttons on the top so I ended up holding it between my longest finger and thumb, leaving my index finger free to work the buttons. Real pens don't have buttons. More to the point, they don't have a trailing cable and so you'll need to position the lead carefully to minimise twisting of the pen body which can cause erratic operation.

Special clicks like those used in *Settlers*, where you hold one button and tap another, would be tricky, but they're ruled out anyway as *Settlers*, like most games which take over the system, reads the Amiga mouse hardware directly and ignores pseudo-mouse signals coming from the serial port. It would be nicer if this pen, like some pad-based devices, had a button built into the point, detecting pressure on the pad, but this might disrupt the operation of the trackball.

At least MousePen2 doesn't limit you to operation on a special pad. It slipped on the shiny top of an official Amiga pad but worked well on the black rubber back, and even better on the leg of my jeans.

CONCLUSION

MousePen2 is an interesting idea, handicapped by the cable and in-line buttons. I ended up with the cable strung around my neck to keep it clear of the desk and to help support the end of the pen. If you'd prefer a pen to a mouse or trackball, it's cheap and worth trying, but you should also consider the Alps GlidePoint and Bit Pads.

Probably the ultimate in this respect is the pressure-sensitive, cordless Wacom, but that costs almost twenty times as much as the MousePen2. As the saying goes, you get what you pay for.

REQUIRES: Kickstart 2+, one free serial port.
SUPPLIER: Epic Marketing (0500) 131486.
http://www.epicmarketing.ltd.net
PRICE: MousePen2 £25.00, MouseIt package £4.99.

Pros and Cons

- \+ Good Amiga system compatibility.
- − The cable often tends to get in the way.
- − Incompatible with metal-bashing games.
- − It requires a dedicated serial port.

OVERALL VERDICT:
An interesting alternative to a conventional mouse.

69%

DIGI Booster Professional

Had enough of your old tracker? Tony Horgan tries out a new commercial offering billed as "the most advanced tracker around".

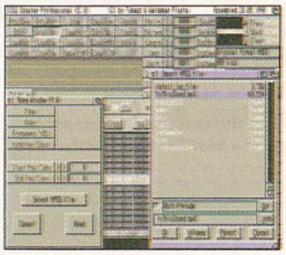
There was an air of excitement as Mr. Postman shoved *DIGI Booster Pro* through my letterbox. I'd already done my homework and read up on its impressive list of features, and dared to wonder whether it might be time to switch from my beloved *OctaMED SoundStudio* which has been in development hibernation for the last two and a half years. But as you can see from the scorebox, the uncorking of the cream soda was a touch premature.

Disappointment number one: it comes on an 880K disk in one of those modified CD cases. That means no demo songs, no samples and not even the bits of Shareware you need to get it working. It's typically shoddy presentation, and people whine about how Amiga software doesn't sell much these days. I wonder why? Fortunately, both my test Amigas are set up with *AHI* and have hard drives crammed full of sound samples and mods.

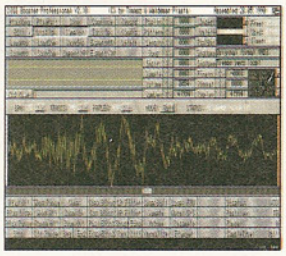
CRASH AND BURN

I tested the software on a 50MHz '030 A1200 and a desktop A4000/'040 with a Toccata sound card. Performance on the A4000 seemed fine at first, until it became clear that the software would crash the second time it was asked to open a file requestor. This is no problem, so long as you like writing music with one sample and you never want to save anything.

DIGI Booster works in two modes, either standard four-channel Paula mode, or via *AHI*. In four-channel Paula mode it's business as usual, circa 1988. Move into *AHI* mode and you gain access to a theoretical maximum of 128 channels. In reality you're looking at about four channels on that 50MHz '030 and twice that on an '040. I didn't have an '060 to test it with at the time, but



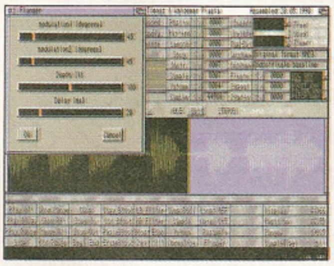
You can import mp3 samples directly into instrument slots, or even just select a smaller part of a big mp3 file



expect something well into double figures for that. It begs the question: what about PPC support?

Let's take a quick look at some of those features I mentioned. Echo effects assignable to individual tracks is a good one, although it chomps through your CPU time to such a degree that it's

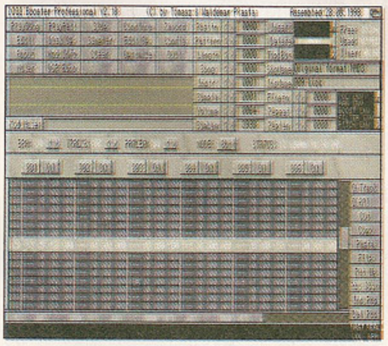
> "...it comes on an 880K disk, which means no demo songs, no samples and not even the bits of Shareware you need..."



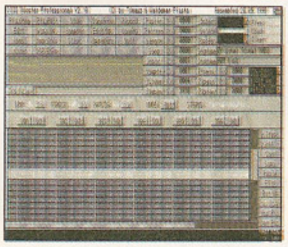
The sample editor has a couple of tricks, but you won't use it for much more than a bit of cutting and pasting

unusable in most situations. Importing of foreign mod formats is useful too (*XM*, *OctaMED* and *SoundStudio*), but it does strip out quite a lot of data from *SoundStudio* songs. You can use two effect commands on each line instead of the usual one. Envelopes can be set up on instruments so that, for example, the volume fades away over a looped part of a sample. The promised filter and pitch envelope features turn out to be absent.

Assuming you've got the mpega.library installed (not supplied) you can import MPEG 1, 2 and 3 audio files into the instrument slots, which is very handy.



The familiar tracker interface is with us once again, unfortunately...



MPEG IMPORT

The sample editor is nothing to shout about. It has problems playing specified sections of samples precisely but aside from that it works. The effects and editing tools on offer cover the basics.

There's a useful high pass and low pass filter option which removes frequencies above or below set frequencies – frequencies which, alas, cannot be changed. More user control of these would have been good. There's also a flanger for adding phase effects.

Maybe you're thinking that it doesn't sound too bad so far. You might be right if you like the kind of hacky screen layout that's always been a hallmark of trackers.

If you don't mind it crashing for no good reason, if you think it's okay for submenus to detach themselves from their parent menus and split themselves across opposite sides of the screen, and if you think it's not a problem to only get part of what's promised then *DIGI Booster Pro* was made for you.

Then again, knowing what a strange breed we Amiga musicians are, I'm sure a lot of the problems I've mentioned won't seem that important to a lot of people. Some of the little things, like having virtually all the same keyboard shortcuts as *ProTracker*, could be enough alone to persuade some to make the move to *DIGI Booster*.

For me, the lack of any MIDI capabilities is a big downer. It's such a basic feature in the overall scheme of things that would have made it an infinitely more versatile system. If you feel like a change from your existing tracker then it's worth a look, but just don't expect too much from it. AF

SUPPLIED BY: Epic (0500) 131486
REQUIREMENTS: 68020 or higher, Kickstart 2.0 or higher
PRICE: £29.99

Pros and Cons

+ AHI output (and input).
+ Imports MP3 samples.
- Poor presentation.
- Spoilt by bugs.

OVERALL VERDICT:
Ardent tracker fans may like it, but SoundStudio users need not apply.

68%

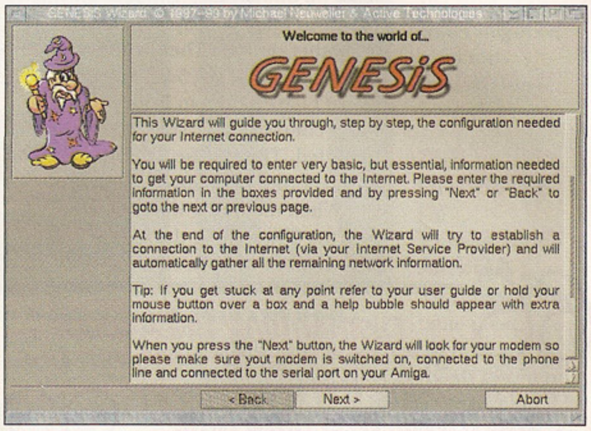
Genesis

AMIGA FORMAT GOLD

NetConnect 2's TCP stack is now available separately. Neil Bothwick tests it out.

Those who don't understand the inner workings of the Internet are often surprised by how well it works, while those who do understand it are amazed that it works at all. At the heart of any network setup is a TCP stack. This is your gateway to the network, handling all traffic in and out. Other platforms get TCP capability built into the OS but we have to pay for it. It may seem a disadvantage but it means we should get better quality networking and more choice.

Until now the choice has been very limited. The old *AmiTCP*, a powerful yet complex program, hasn't been available for a while, leaving *Miami* as the only choice for most people. *NetConnect 2* contains *Genesis*, an evolution of *AmiTCP*, and this is now available separately for those who don't need the rest of the *NetConnect* suite.



The *Genesis Wizard* does a good job of automatically determining the correct settings for a dialup account.

> **Genesis supports multiple interfaces and users, making it very easy to switch between different ISP accounts...**

GETTING STARTED

Installation and setup for a dialup Internet connection is an absolute doddle. After running the installer it offers to run the *Genesis Wizard*. You only need to select your modem and give your login details, then it dials in and gets the information it needs from the ISP. This takes a few seconds and you're then given the option of viewing this data before saving it.

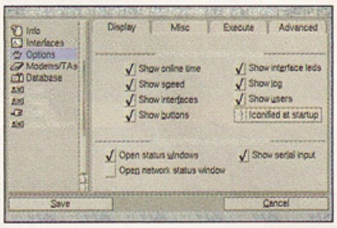
That's it. Start *Genesis* and you'll see that your ISP information is ready for you to use. Click the Connect button and you should be online.

MULTIPLE SETUPS

Genesis supports multiple interfaces and users, making it very easy to switch between different ISP accounts or even different setups for the same account. The default GUI shows the current interface and user, the time online, the connect speed, "LED" indicators for the status of each interface and Connect/Disconnect buttons.

All of these are configurable so you can display as much or as little detail as you wish. You can even run it with no GUI at all, controlling everything via *Genesis*' ARexx port. The main GUI is kept small by having the settings options in a separate preferences editor, run from the *Genesis* main window. This has been significantly changed from the previous version of *Genesis* and is now much easier to use.

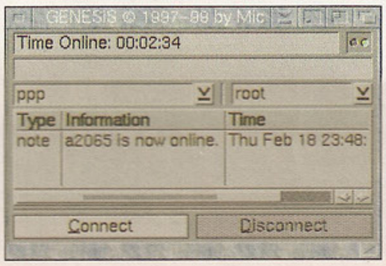
Adding extra interfaces is done in one of three ways. You can run the *Wizard* to dial each ISP and generate the configuration, you can copy an existing interface and edit that (ideal if you want multiple setups for the same ISP) or you can create it by hand in *GenesisPrefs*. The only time you need to use the third option is when you're creating an interface for a small LAN. This is very easy and getting two Amigas to talk to each other over Ethernet only took a couple of minutes at most.



There are plenty of options available in *GenesisPrefs*.

KEEPING TRACK OF COSTS

In addition to displaying the online time of the current connection, *Genesis* has a powerful call logger. This is totally configurable in terms of time bands, call charges and discount options. The log shows a list of calls with total cost and simple graphs of time and cost statistics. My only gripe with this is that it's rather tedious to set up as each day has to be set up separately, meaning you have to input the same set of weekday data five times. It has the option to export and input cost settings, so the inclusion of some default settings for BT and other major telecom companies, either on the disks or from the support website, would have made setup much quicker.



The basic *Genesis* GUI, taking up little screen space. Note the LEDs show one interface is online, the Ethernet one, yet the online counter is still counting. It's only a small bug but it shows that there's always room for improvement.

Genesis is supplied with fairly comprehensive documentation in HTML format. There's no option to open the documentation from within *Genesis* via the Help key, although I understand that this may be included in the next version.

As a regular *Miami Deluxe* user, I was surprised by the improvements in the latest version of *Genesis*. It really is a very capable TCP stack, easy to set up in most areas and well suited for dialup or LAN use at a good price.

SOCKS APPEAL

Ethernet users will be pleased to hear that *Genesis* comes with a SOCKS client, meaning they can use any machine equipped with a SOCKS server as a gateway to the Internet.

SOCKS is a proxy system that allows one machine to connect to a network via another machine, like a firewall. There's also a separate SOCKS server available for free download that lets you use a *Genesis*-equipped Amiga as the gateway, although I found this less effective than the SOCKS or IP-NET (address translation) implementation in *MiamiDx*. Having said that, *Genesis* is roughly half the price of *MiamiDx*.

UK SUPPLIER: Active Technologies: (01325) 460116.
PRICE: £24.95.
(upgrade from *AmiTCP 4.3*, £19.95).
REQUIRES: OS 3.0.
TESTED ON: A4000/'060/PPC and A4000/'040 with A2065 Ethernet cards and V90 modem.

Pros and Cons

- \+ Easy to get started.
- \+ Detailed logging of call costs.
- \+ Reasonably priced.
- − Gateway setup needs improving.

OVERALL VERDICT:
Excellent value for money.

90%

Towerhawk 4000 II

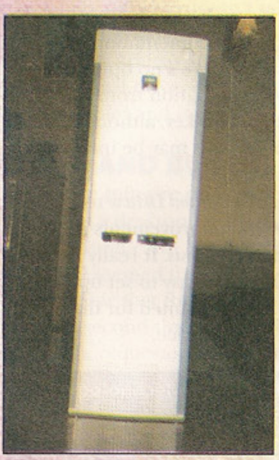
ex RBM Computertechnik

Reader Reviews

Bård Olav Olsen finds that towering up his A4000 is an uphill struggle…

Since 1992 when I first bought an A500+, I've dreamed about getting a towered A4000. This autumn I finally put the money into an A4000 desktop, but I soon realised that this wasn't suitable for me – I needed a tower. A huge tower.

I remembered a friend of mine had bought a maxi-tower for his A1200 a while ago and decided to check if this tower, which was a beauty, was available for my "new" second-hand A4000 desktop, and yes, it was: the Towerhawk II ex. I quickly saw that they'd changed the casing as the old tower looked almost like the EZ-tower from Eyetech, but this new version from RBM had a more common look, except for the slide frame in the front.





As you can see from these photos:
a) The tower is fairly bland looking.
b) Bård lives on the side of a hill.

TECHNICAL DATA

The tower is made of solid steel and also comes supplied with a new ZorroIII busboard which has four ICA slots, seven ZorroIII slots and two video slots. It also has a 3.5" bay that can take one 3.5" disk drive(floppy/Zip) and three more bays for hard disks below it.

I miss a second slot for a disk drive as you have to use the extra 5.25" disk drive bay to fit a 3.5" device and this takes up one of the 5.25" bays, leaving only four available bays for CD-ROMs and other devices. There's also a hidden slot at the top of the 5.25" bay that doesn't have a built-in front plate. The tower comes with a 230W PSU already mounted. There's also extra space ready to fit another fan if desired.

When mounting the motherboard into the Towerhawk, the mouse and joystick-ports get placed towards the bottom of the tower, but the package comes supplied with two 9-pin extensions that must be used to link the original ports to the back of the tower. These cables can be hidden at the side of the tower where the motherboard is put and so won't be in the way.

> "Dismantling the A4000 desktop was no problem but reassembling the machine in the tower was pure hell."

One good thing is that the case cover is divided into three parts: top, right and left, and they can be dismantled separately. This means you don't have to take off the whole case as before.



The A4000 before its tower transformation.

THE MANUAL

The manual supplied with the tower is quite good, but it does lack a few details as it's just a seven page pamphlet. It also has a few errors on how to fasten the screws that should hold the motherboard but all this might be because the Towerhawk described in the manual is a different version of the tower than the one I got.

REASSEMBLING THE A4000

Dismantling the A4000 desktop was no problem but reassembling the machine in the tower was pure hell. If the A4000 is fitted as according to the manual, the motherboard will be bent since the joystick/mouse ports are in the way. I had to solve this by cutting out a 4x10cm space so it could go through the plate the motherboard is fitted onto.

Fine, I thought, and mounted the ZorroIII busboard to the daughterboard socket. The busboard replaces the

YOUR REVIEWS

Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

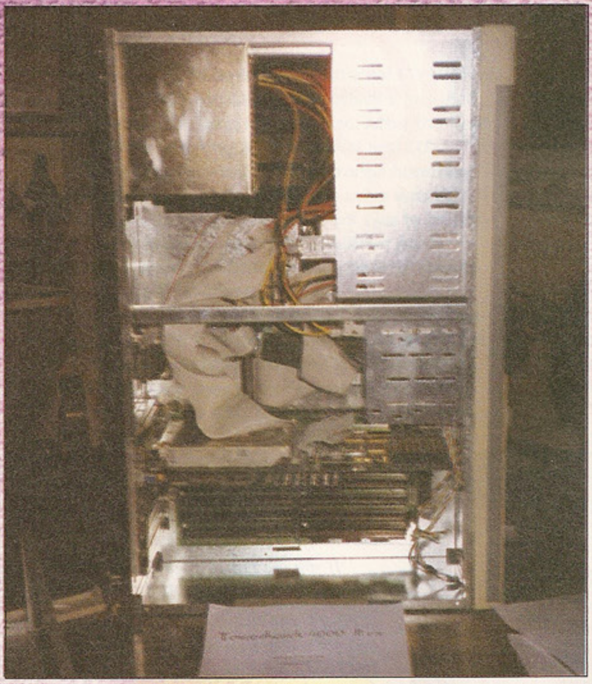
We will also need some good photographs of any hardware you review and a passport photo of you. Send your reviews to: *Amiga Format* • Reader Reviews • 30 Monmouth Street • Bath • Somerset • BA1 2BW.



How on earth am I going to fit all of this into there?! Oh well, it looks easy enough...

BEN'S VERDICT

Towering an A4000 is a tricky proposition if you don't want to have your Zorro slots hanging upside down. While this RBM tower obviously gets around that problem by offering an extender for the normal Zorro daughterboard, its lack of ease of use means that it'll be restricted to those willing to put serious time and effort into converting their machines. It would interesting to find out if RBM do the ZIII extender board on its own, though.



Okay, got it all in there. See that sheet of paper? It's the size of my bed – this is a BIG tower...





original ZorroIII daughterboard that was in the desktop. I then fitted my drives, the ZorroIII SCSI controller and the cables. Time to try the machine, I thought, but there was no reaction.

I couldn't figure out what was wrong but as I saw that the CPU-board was fitted in at a bit of an angle, I took a closer look at it. The CPU-board had a jumper on it that was squeezed into the steel plate, so I cut out a piece of the plate here too. Suddenly the CPU board fitted like a glove and my A4000 worked. When I get a CyberStormPPC I'll have to cut even more…

Another thing that's pretty lame about this product was that the power switch that came with the package didn't fit. I had to bend the screw connectors on the power switch to make them long enough to fit the screw holes. I also had to use a knife to increase the width of the switch's hole and in some strange way I managed to make it work.

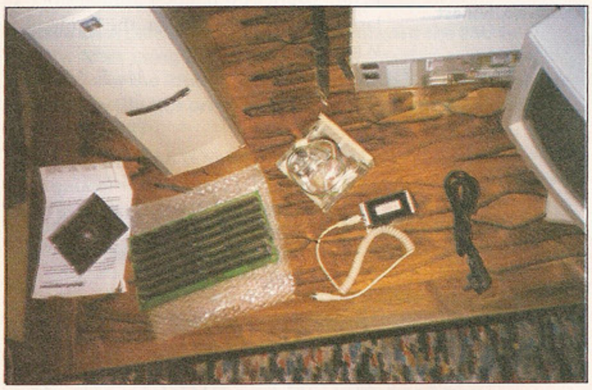
Alternatively, this power switch may be set to 'on' and just taped tight into the top of the tower, then the power switch on the back of the tower might be used for 'on/off' work instead.

THE UNIVERSE IN YOUR NEW AMIGA

The tower is quite good, actually. The drives and devices are easily accessed and CD-ROMs like mine that are too large for the desktop fit very nicely. The jumpers on the devices might be a bit hard to get to but the devices in the 5.25" bays are very easy to take out and adjust. The 3.5" bays must be dismantled if new drives are to be fitted, but since this is pretty simple to do, it isn't much of a problem.

One thing that should be mentioned is the space between the 3.5" bays and the CPU board. According to the manual, it's advised that you put something between the bay and the board if you fit one of those bigger CPU boards like the CyberStorm or the CyberStormPPC. This is because of the heat that's developed by the PPC and the '040 or the '060. It's also suggested that you use the plastic that's in the bottom of the desktop case, but since I haven't got a Cyberstorm, I haven't been able to look into this.

The components you get – an instruction manual, the Zorro extender and the floppy and keyboard adaptor.



VALUE FOR MONEY?

First, I must say that I really hadn't expected there to be this much trouble with the tower. If I'd known I would never have purchased it, and when the tower cost NKR 3496, which is about £269, it just isn't worth it. This is especially true when you consider that the manual is for a different tower, the power switch doesn't fit and the user has to modify the case just to get the computer up and running.

You might wonder why I didn't just send the tower back to the dealer, but to be honest, I'd spent all my money on buying the thing and couldn't afford to pay the postage to send it back…

However, now that I've got it up and running, I think it would have been a mistake to send it back as I'm now very comfortable with it.

OVERALL VERDICT

If you have a well filled wallet and you really love DIY work then this tower is likely to be perfect for you. If, on the other hand, you don't, I'd seriously suggest that you look for a cheaper tower that has a lot less flaws.

MANUFACTURER: RBM Computertechnik +49 (05251)64064, fax +49 (05251) 640655.
Email: support@rbm.de
Website: http://www.rbm.de
REQUIRES: A4000 desktop, a lot of tools and a calm mind…

Pros and Cons

- \+ It's possible for you to add an extra fan.
- \+ New ZorroIII busboard with ZorroIII, video and ICA slots.
- − It's extremely overpriced for just a tower.
- − Wrong manual and the tower needs to be modified for use.

OVERALL VERDICT: An okay tower for those who can afford it and don't mind the extra work.

79%



It now works fine and looks good to boot.



Workbench

Technical queries solved by John Kennedy. Email: amformat@futurenet.co.uk, putting Workbench in the subject line, or write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

AMIGA LINK UP

I've recently returned to the Amiga after going over to the PC for a couple of years. I'm a pensioner and enjoy using programs like *Amos* and *DPaint V*. I recently bought an A1200 which turned out to be only 1Mb when I thought all A1200s were at least 2Mb.

I also bought an A500+ because it had a CD drive (A570), an extra floppy drive and a genlock with it, expecting to be able to use the hardware on the A1200, not knowing the A570 wouldn't fit the A1200. I'm left with a complete mixture that's short on memory, with the problem of making a workable unit with only a pension to help me.

What I'd like to know is if there's any way of coupling up the two computers so I can use all the hardware, or is there an adaptor to let me use the A570 CD drive on the A1200?

Also, I have to expand the memory of the A1200 and I'd like to know the least expensive way of doing this. I read all the ads in your magazine and I'm totally confused with this RAM and that RAM. There's even a new animal since I last worked on the Amiga, the Squirrel. What the heck is that?



It's a nut storage interface for your A1200. No, honest...

Mr. E. Molyneux
Braunton

There's no such thing as an A1200 with only 1Mb of memory. I suspect you're looking at the graphics memory display and seeing that it's less than 2Mb, and so deciding you have a 1Mb machine. This isn't so: the screen display and other bits and pieces running in the background consume memory.

If you only have 1Mb left, it's possible that a recoverable RAM disk has been mounted and this is eating up your RAM – look for a disk icon named RAM0: or similar. If this is present, open up your DosDrivers directory and copy the RAM disk device back to the Storage directory and re-boot.

Annoyingly, the A500 peripherals simply cannot be used on the A1200. The A1200 is a totally different beast. There's even a good chance that the genlock won't work. You can link the two systems via a simple network, though. This will give the A1200 access to the A500's CD-ROM drive.

You should look for a package called PARnet. *The software is free but you'll need to either buy or make a lead to connect the two machines via their parallel ports. A version using the serial ports, SERnet, is also available, although it's much slower.*

Expanding the A1200's memory can be done in one of two ways. Firstly, you can buy a memory expansion and shove it into the expansion bay. This is the cheapest way and a 4Mb expansion shouldn't cost you more than £40, plus it'll be a lot less if you can find a used one.

For only a little more, it might be worth taking the second route: using an accelerator card. This is an expansion card which not only has memory, but also a faster processor, such as a 68030. These make a huge difference to the speed at which the A1200 works, and again, if you can find a second-hand one it shouldn't break the bank.

The Squirrel (there are two versions) is a SCSI interface which connects to the A1200's PCMCIA expansion slot. It's an easy way to add extra CD-ROM and hard drives, although it's not the cheapest way.

CD^{32} EXPANSION

I have a CD^{32} with an SX32-P50.
1. If I add a 2.5" hard disk to the SX32 unit, is there a limit to the size of the hard disk?
2. What games use a floating point unit?
3. Do all A1200 games work with the SX32 unit? If not, which ones?

Boris Ribeiro
via email

1. The Amiga's operating system is limited to 4Gb, but given the greater expense of 2.5" drives it's usually the money which runs out before AmigaDOS!
2. Few games use a floating point unit – I can only think of some of the Quake engines.
3. Not all games work on the CD^{32}. Most of them should, but I don't think there's a comprehensive list anywhere. Perhaps if there's a website somewhere, someone will let us know.



It's that CD^{32} shot again!

CD^{32} EMULATION

I've been attempting to establish a CD^{32} emulator on my A1200 so I can run the games I received at Christmas. I've experienced problems with both sound and vision, which I'm told is because my CD runs too fast (12x speed Pioneer) and that I need software to slow the machine down. It's been suggested that a program called *SlowCD* would do the trick, but having contacted my PD supplier and looked through the files I can find for Aminet CDs, I've been unable to trace this program.

Can you help me by publishing this program on the magazine's CD-ROM, or another program that would serve the same purpose?

Mike Turner
Birmingham

I couldn't find any details on a utility called SlowCD either. It could be that it was part of an SDK (software development kit) which was only made available to developers. The Aminet is full of utilities for using CD^{32} software on A1200s and so are our CDs, although not this particular file you're looking for.

DRIVE ON

I've just bought a 3.5", 8.4Gb hard drive (Fujitsu) which came with a lead. What do I need in order to get the hard drive working with my Amiga? It seems to require its own power source and the hard drive lead doesn't connect to my Amiga as the connector is too big.

In *AF119* you review something called an IDE Express. Is this the solution to all my hard drive problems?

IF IT DOESN'T WORK, THUMP IT

Last January I bought an 8x speed external CD-ROM drive for my A1200. I installed the software included and was very happy with my purchase. After the first three months of running *Amiga Format* and *CU Amiga* cover CDs, I started to hear strange humming noises from it. I also noticed that the drive wasn't booting. The only way to make it work was to gently but forcefully hit the side of the box. After much frustration it would eventually work, so until about two weeks ago I continued like this.

Unfortunately, a month ago the CD drive packed in altogether. I sent it to the supplier, who returned it saying there was nothing wrong with it. I've lent my CDs to a friend and they work fine on his machine. I had noticed that your CDs, especially the later ones, booted up easier than *CU Amiga* CDs.

What's wrong and how do I fix it?

Daniel O'Brien
Essex

Anything you have to hit in order to get to work (like most of the people around here) is clearly A Bad Thing. It sounds as though there's a loose connection somewhere, so double check that all power and data cables are fitted snugly home.

Where else there could be a loose wire depends on exactly how your A1200 is connected to the CD-ROM drive. Is it via a black box connected to the PCMCIA port, for example? If so, the loose connection could well be inside the case housing the CD-ROM drive mechanism itself, as I presume it's the drive box rather than the A1200 you have to hit. If you can, open up the CD-ROM drive box and check everything. If you still can't get it to work, try using the drive as well as your CD's on your friend's system.

If it doesn't work there, clearly the drive itself is at fault and you should continue to hassle the supplier, demanding a replacement.

I've scanned the adverts but no advert offers hard drive power supplies, but some offer an *IDEfix*?

Shaun Pearson
Worthing

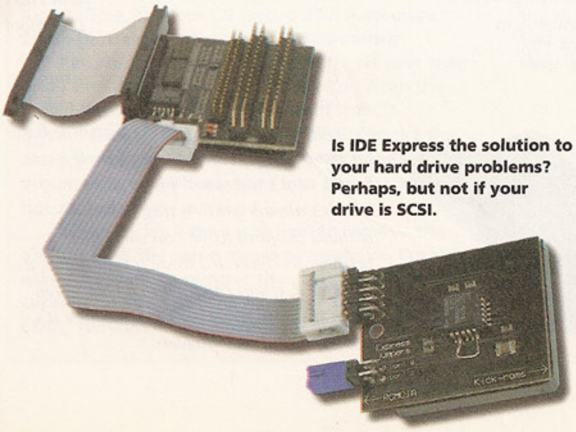
How you proceed really depends on which interface your hard drive is using, specifically EIDE or SCSI. Any 3.5" drive (and as your drive is a whopping 8.4Gb, it's unlikely to be a 2.5" drive) has a separate power and data connection. In fact, the power connector is the same for both IDE and SCSI drives and neither is available from the Amiga A1200 without requiring a little extra effort first.

Let's work out which sort of drive you have. Look at the drive's data connector and you'll see it consists of two rows of pins. A SCSI drive has two rows of 25 pins and an IDE drive has two rows of 20 pins. Now you know what sort of drive you have you can start work on getting a suitable interface for your Amiga.

If it's an IDE drive, you can utilise your A1200's built-in IDE interface. Although the interface is designed for a 2.5" drive, it can be adapted by means of a special cable that usually comes with an adaptor which borrows power from the floppy drive. If the drive is slim enough, you might even be able to fit it into the Amiga's case. If not, you'll have to find a way to house it and then pass all the data and power cables into the Amiga's case.

If the drive is a SCSI mechanism you'll have to buy a SCSI interface for your Amiga. You have several options. A device such as the Squirrel from HiSoft connects to the little-used PCMCIA port, but you'll need another adaptor cable to change the Squirrel's large Centronics-format connector to one suitable for plugging into the drive itself.

Another way to get a SCSI interface is to buy an extra add-on card for your Amiga A1200's accelerator card, if available. A SCSI drive will require housing, either in a dedicated drive box or in something like a mini-tower PC case.



Is IDE Express the solution to your hard drive problems? Perhaps, but not if your drive is SCSI.

INTERFERENCE

I have an A1200 and have recently upgraded the PSU to 200W. After using it, I've found that it interferes with the sound from the RF unit and also the audio ports. Is there any way to rectify this problem, such as a suppressor or some other gadget?

J. Scott
Workington

That is slightly worrying as the PSU shouldn't really be causing much in the way of electrical noise as it's designed to be used inside a computer. You could try adjusting the A1200's RF switch to see if this makes a difference. Another trick is to use a "ferrite core". This is a small metallic ring which you pass the power cable through to suppress the noise. Pinch one from another appliance around the house

BAD BLOCKS

I've recently been getting read errors on my hard drive. The following message appears: 'Work has a read error on disk block 1319721'. I'm getting these messages on over 50 blocks and I don't know what to do about them.

I've read the latest version of Harddrive.guide from the *AFCD* and still can't get rid of these errors. I've tried using *HDToolbox* using the 'verify data on drive' option. This runs for about 15-20 minutes before displaying this message: 'Drive reported no errors from verify command'.

I've also tried using *QuarterBack v2.0* (this is the only version I have and cannot justify buying the latest version unless I know for sure that it will solve my problem), using the Analyze and Repair Volume option. The process starts okay and eventually freezes on 57% (I've left it in this state for hours and there was still no sign of life). A reset was the only option. Once rebooted I tried the same again, only to get the same result.

Also, I have a drawer which I can't delete. Using Workbench to delete it, I get the same message as above: 'Work has a read error on disk block 1319721'. If I delete it from the CLI I get the message: '<Drawer> not deleted: Directory not empty'. When opening the drawer from Workbench or *Opus* there are no files in it.

If the worst comes to the worst and I have to reformat my hard drive, would it be wise to back up my internal drive to my external drive as this is currently redundant? If so, what would be the best software to use as I've never backed up a hard drive before?

If I have to buy a new hard drive (probably 2Gb) can you recommend one to buy as the two hard drives I've had in the past have caused me the same problem as above. Can you also explain why I'm suddenly getting these read errors when I've never had a problem in the past? How can I avoid getting them?

Steve Wroldsen
Great Sutton

Continued overleaf ➡

Feedback

I must disagree with your advice to a reader to dump their A2000 in favour of an A1200. I have an A2000 with an '030 at 50MHz with 50MHz co-pro, 17Mb, 1Gb hard drive, WB3.1, 12x CD-ROM and the main expansion for me, a Delfina sound card.

Okay, I lack AGA, but you only need that for games. All my serious applications work without it. I could get a PicassoIV, but why bother when I own a PlayStation? In fact, I used to own an A1200 in a tower with a 7-slot Zorro busboard, which I sold, and with the money I was able to buy the above A2000 kit. This proves that it doesn't cost more to upgrade an A2000 than an A1200.

I don't agree that an A2000 should be dumped. It's much more expandable and was designed for this sort of expansion. The A1200 in a tower is a home-made item.

Justin Tuijl
Thetford

I totally disagree with your comment that AGA is only for games. AGA provides a great deal of very useful new screenmodes, as anyone interested in using graphics packages will confirm. The AGA chipset is also a great deal faster, making all operations a lot smoother. If you want to use expansion cards, some of the A1200 expansion towers look very professional and, in fact, many are more suitable than (for example) the A4000, which even has problems housing a standard CD-ROM drive.

TOWER PLANS

I own an Escom A1200 HD with a 4Mb RAM board in the trapdoor slot. My problem is that I want to expand my system but don't know which route to take. A tower is the first thing on my list, but I can't decide between the EZ Tower and the Power Tower. I don't need too many drive bays but I'd like Zorro 2 and 3 compatibility for a graphics card like the PicassoIV and a sound card like the Prelude.

The tower would need to hold a PPC accelerator and/or a BoXeR, a DVD drive when an Amiga compatible one arrives and an .mpg card. I know that to watch CD or DVD movies I need an .mpg decoder. Is there such a card on the Amiga, or even a module for the Picasso? There's no way I'm paying £400 for a player that can't play imports.

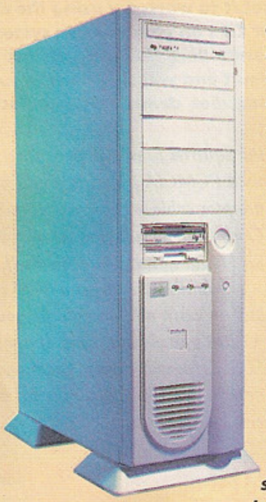
I want to learn how to program computer games and utilities. Which language do you suggest I start with and where can I purchase all the reference books to help me? An easy language is best, but not *Amos*, and one with a good manual.

Last but not least, I'm thinking of going on the Internet using the PACE Solo and *NetConnect* combo, but which additional cards do you suggest I buy to give the fastest possible access from my serial and other ports?

Thanks for any help you can give me and keep up the good work – the mag is the best it's been in a long time.

Phillip Christie
Aberdeen





EZ or Power? The choice is yours – both are pretty good.

Good luck with your tower shopping: perhaps you can talk to the suppliers and see if they'll do you a deal including the PPC board.

There aren't any MPG/DVD decoder cards available for the Amiga at the moment. There aren't that many for other platforms either, so I'm afraid you'll have to make do with the standalone player unit and only play movies that are intended for this region.

Some might say there's no such thing as an "easy" programming language. Amos is always a good place to start for beginners, but if you're dead set against it and if you're serious about programming, C is the best language available and it's ideal for both games and utilities. It's hard work, but the rewards are worth it.

If you're planning on using the Internet, you might find that you don't really need things sped up – most of the time the bottleneck isn't the Amiga's serial ports, it's the speed at which the data is coming from the rest of the net.

If you want to make sure you're connecting at top speed, the Surf Squirrel is a popular choice as it provides a fast serial port and a SCSI interface. This is useful when you're thinking of expanding your existing system.

Your hard drive is on the way out, or at the least it has a few bad blocks. These could just be corrupted areas of the disk or there could be physical damage to the disk's surfaces. A re-format is the only way you're going to get to the bottom of it and make the disk safe for storing data. Yes, it would be wise to make a back-up because when you re-format it all the information which is currently on it will be erased permanently and totally.

There isn't anything magical to backing up your hard drive: just copy all the files to the external hard drive. Make sure you have "Show all files" on, drag and drop the folders from the dodgy drive to the blank external drive and then reformat the internal drive.

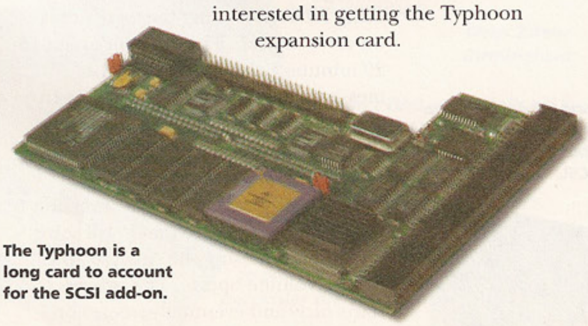
If you're lucky, there will have only been some data corruption and you'll be able to copy all the files back again. If not, you'll have to do a little detective work with a hard drive utility such as HDToolBox. *You might find that the area of the drive which gives you grief happens when you partition the drive to be anything larger than 600Mb, so make the partition less than 600Mb. Then create a new partition from, say, 650Mb. Leave the broken parts of the disk unused and your drive should give you plenty more use.*

There's no need to buy a new hard drive unless you really want to. I'd stay clear of the extra large sizes: multi-Gb drives of the 2.5" variety are very expensive and the Amiga mightn't be too happy with extra large partitions anyway. In any case, there's a contradiction there: how can you be having the same problems as you've had in the past and yet not have had any problems in the past? I'll have to have a think about that. In the meantime, try lowering your MaxTransfer rate in case that has something to do with it.

EXPANSION QUESTIONS

I've just towered up my beloved A1200 (10Mb, FPU, '020, 170Mb 3.5" HD) by going down the road of buying a second-hand PC tower with 250W for £25. Getting the tower wasn't a problem, but now that my Miggy is inside it the PSU stops my expansion card from fitting properly (the top of the card overlaps with the bottom of the PSU by about 1.5cm).

1 Are all A1200 expansion cards the same size (trapdoor, not Zorro)? The reason I ask is because I'm interested in getting the Typhoon expansion card.



The Typhoon is a long card to account for the SCSI add-on.

2 Will I be able to use WB3.5 even though I only have the 3.0 ROMs?

3 If not, would it be possible to use the ROM image of the 3.1 ROM and use WB 3.5 then?

Paul Wood
Huddersfield

Not all PC power supplies are the same size. It might be possible to fit a more compact unit and give yourself more space.

1 All A1200 trapdoor expansion cards are obviously limited in size by the trapdoor. Some are smaller, but all the ones I've seen completely fill the slot. Some need cooling fans and so need even more space.

2 The last report I read stated that the new ROMS were needed. Obviously, when the OS update is released we'll bring you the full details.

3 Theoretically you could shadow the ROM, although this would take up RAM. Also, where do you plan on getting the ROM image from? It's copyright, so to use it legally you would need to own it, so you might as well install it.

FASTER, FASTER

1 I recently bought a new Blizzard 603et to go in my Power Tower. On installing the card my Amiga failed to boot correctly. The hard drive whirred for maybe two seconds before the power light started flashing like in a pre-Guru situation, then resetting itself before doing the same thing again and again. I've sent the card back for testing but I'm not certain it's the card which is at fault.

Could my tower installation be faulty in one area? Could it be the software or libraries like the PPC library or WarpOS thing, or maybe *Setpatch*? I've installed a clean Workbench with no hacks. Could it be a power problem?

2 When (if) I get the accelerator working, with its increased speed would it be possible to do things like real-time .mpg playback and non-linear editing, without the need for an expensive Zorro 3 card or the like (with the exception of needing a graphics card and a fast SCSI hard drive...)?

3 What is the best option for an A1200T in the case of fast Internet access/downloading? I've heard about things like Zorro Ethernet boards and high speed serial ports but I'm a little confused about the overall situation.

John Hart
Liverpool

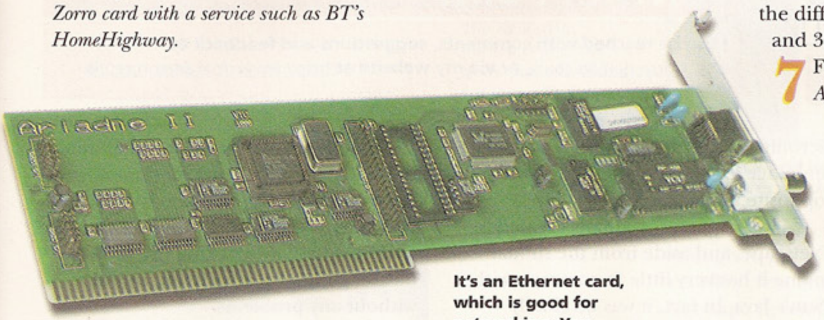
1 It's unlikely that the tower expansion has damaged anything which is only showing up when you use the Blizzard. It's far more plausible that the card itself is faulty, or it's not seated properly.

It's always worth trying the card without the hard drive and any other peripherals connected to see if that makes a difference. If you can't get to a boot screen when the hard drive isn't present then it's clearly a hardware problem.

2 *What you can do with the card depends on what software there is for it. Existing Amiga software isn't going to take advantage of the extra speed of the PowerPC processor and so you're pretty much at the mercy of the dedicated programmers developing for the PowerPC/Amiga platform.*

MPG playback is possible with programs like AmigaAMP. *Non-linear editing is something which is always going to require hardware because no processor can convert video to data and vice versa by itself.*

3 *As mentioned in a previous answer, it's rarely the Amiga itself which is the bottleneck in the quest for superior downloading speeds. The best solution currently available would be to use an ISDN Zorro card with a service such as BT's HomeHighway.*



It's an Ethernet card, which is good for networking. You want an ISDN card.

PULL THE OTHER ONE...

I've recently purchased a phase 5 PPC accelerator card (603e/160MHz/'040/25MHz), although I haven't yet received it. However, I'm currently studying for a degree in Applied Computing and as such I'm interested in producing a 680x0 emulator for this board. I've decided to write a 68020EC emulator first, but as I don't know much about *Assembler* it could prove to be very difficult. I'd be grateful if you could answer my questions:

1 I'd like to know how I'd be able to load a 680x0 executable file into a specific area of RAM using the PPC.

2 How exactly is each instruction of the 680x0 series represented in binary? For example, is 00000011 to load a specific location into memory?

3 What do each of these commands do? For example, LDA = load the accumulator with the following data/memory address.

4 What are the instructions for the PPC 603e processor (mnemonic)? What do they do?

5 In my idea for the emulator, I want to utilise the power of the PPC chip to emulate a super fast 68020EC, and later a 68020/MMU/68882, and utilise the current hardware of the A1200, if this is possible. If, say, I properly emulate the 68020 processor, will it work in conjunction with the A1200 hardware as it would if it were an actual 68020?

6 Is there any chance of you telling me where to find information on the PPC instruction set? Also, are the 68020 instructions all 32-bit or is there a mixture? If so, how do you tell the difference between 16-bit and 32-bit instructions?

7 Finally, where's the *Amiga Format* website?

Andrew Miller
Larkhall

1-4 *Come on, you want me to write your project for you, don't you? No, I don't think I'll fall for that old trick. Contact Motorola and get the data books for the 680x0 and the PowerPC family. These will contain all the information you need.*

You say you don't know much about Assembler, *but by the time you've finished your project, you'll know plenty.*

5 *The PowerPC architecture has special features designed for 680x0 emulation; after all this was the approach taken by Apple to migrate their operating system and applications to the new hardware.*

The PowerPC could certainly appear to be a true 68020, but the hardware of the Amiga could present you with problems. In the existing system, the 68020 and Custom Chips share memory. In a PowerPC system, the PowerPC CPU is in a separate memory map. It's really designed to work in tandem with the existing 680x-0, not replace it.

6 *Again, contact Motorola and get their data books.*

7 *The* Amiga Format *website is part of the FutureNet collective and can be found at* http://www.futurenet.co.uk

COVER CD TROUBLE

Setup: A400/EC '030, 16Mb RAM, PicassoIV, Mitsumi 4x CD drive, Tandem CD card, 3.2Gb hard drive, 2.6Gb hard drive, Microvitec 1438 monitor.

I've started to use the cover CDs on your mag and I find that I can't remove the icon from the Workbench after removing it from the CD drive. I click on the *AFCD* setup icon to make the assigns and get the message 'wrong number of arguments' and it then goes into the disclaimer notice. I can then use the CD.

When clicking the same icon to remove the assigns I get the same message as above. I'm then asked if I want to remove the assigns. When clicking on Yes, I get the message 'Can't subtract CDxx' (whatever the current CD number is). After this window is closed I remove the CD from the drive but the icon remains on the Workbench. Can you help please? This is annoying when using several CDs.

Ivan Jaco
Beccles

This shouldn't be a problem any more, and shouldn't have been a problem for a fair while. I can only assume that you're running stuff from the CD when you try to remove it, as this will leave an icon on-screen in standard AmigaDOS practice.

Anyway, starting with AFCD35, you should be able to run any program by copying it off the CD onto your machine.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved).



John Kennedy.

Also:
- Be concise.
- Do your best to detail the problem.
- Describe the events that caused it.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Fill in, photocopy or copy the form below as best you can. Unfortunately we cannot reply personally.

You can email your queries to amformat@futurenet.co.uk putting "Workbench" in the subject line.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... **Mb**

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

....

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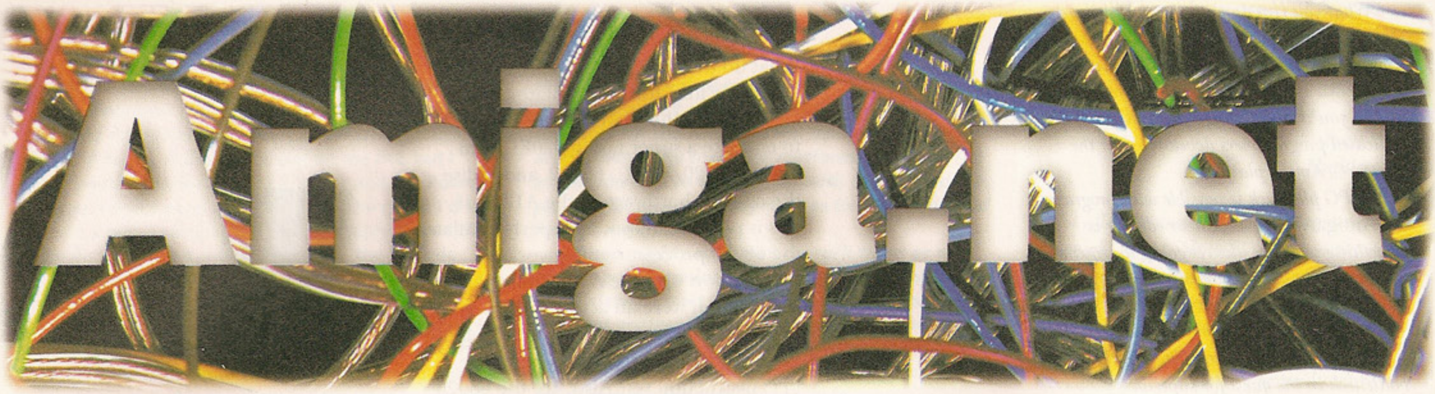
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Amiga.net

Dave Cusick gets to grips with Javascript, one of the most powerful tools a webmaster can harness.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my website at http://www.dcus.demon.co.uk/

When version 3.1 of *AWeb* appeared with its support for Javascript 1.1, surprisingly little fuss was made. Having Javascript support on the Amiga wasn't a priority, said many; Java support would be a far more valuable addition.

Well, there's a certain logic to that point of view. Since Java is a fully-fledged programming language, having Java support on the Amiga would indeed be a marvellous thing.

To the average Amiga net user though, Javascript is actually a far more useful thing to have access to. Those of you who've used Java-compliant web browsers on the PC or Mac will realise that, as yet, Java applets have never really been used for anything very useful. There are plenty of fancy scrolling tickertapes, but they scarcely enhance a website – often quite the opposite, in fact.

Javascript was originally created by Netscape, and aside from the similar name it has very little in common with Sun's Java. In fact, it was originally called Livescript and only underwent a name change when the world and his uncle started getting excited about Java.

Essentially, the language is designed to help webmasters add interactivity and functionality to their pages, since basic HTML doesn't allow for an awful lot of either of these things.

> When you start using AWeb, you may be surprised to discover that many sites make use of Javascript effects...

The most widespread implementation of Javascript is version 1.1, as featured in *AWeb*, although 1.2 is featured in *Internet Explorer 4* and *Netscape Communicator* and version 1.3 has recently appeared.

Javascript has all sorts of applications, and the best way to have a look at some of these is to download the demo of version 3.2 of *AWeb* from Aminet. If you usually use another Amiga browser and you've never visited a Javascript-heavy site and seen some of the things it can do, download a copy of *AWeb* and prepare to be impressed.

AWeb is a little picky in its handling of Javascript, often complaining of errors which other browsers don't detect. However, if you do come across an error message, clicking the Debug button generally completes the script without any problems.

When you start using *AWeb*, you may be surprised to discover that many of the sites which you regularly visit make use of Javascript effects, although you'd never have been able to see them before because your browser wouldn't have supported them.

So what sorts of things can Javascript do? Well, on a simple level you can use it to report things such as the name of the browser currently being used (and yes, under *Mozilla* spoofing you'll find *Netscape* can be reported when you're actually using an Amiga browser).

JAVASCRIPT CONTROL

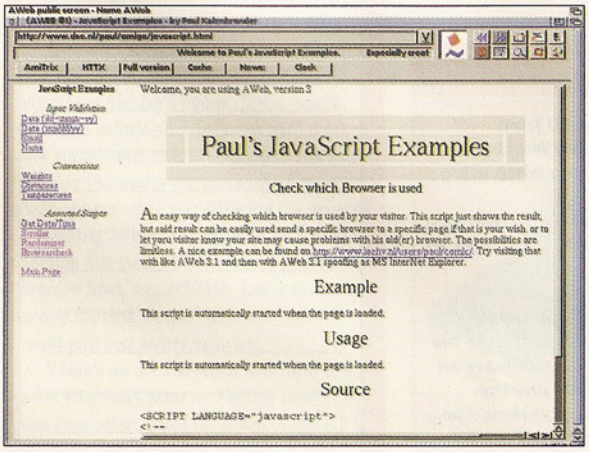
On a slightly more complicated level, Javascript can be used to control browser windows and frames. A couple of issues ago, we explained how you could ensure that someone entering your site without going through the home page could still get to see your frameset, so long as they were using a Javascript-compatible browser.

Since the vast majority of web users seem to surf using *Netscape Navigator 2, 3* or *4* or *Internet Explorer 3* or *4*, probably more than 90% of the visitors to your site actually use Javascript-capable browsers – unless, of course, your site contains content specifically aimed at Amiga users. The nice thing about Javascript is that when it's properly written it can be totally ignored by non-compliant browsers; unlike, for instance, frames.

Javascript can also be employed in the creation of some particularly nice features which will really enhance a website, including things such as site search engines, random quotes, quick link boxes and so on.



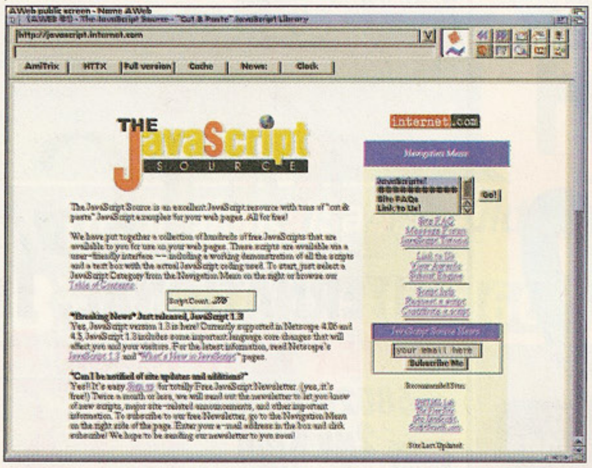
BigNoseBird's Javascript site contains plenty of excellent example scripts.



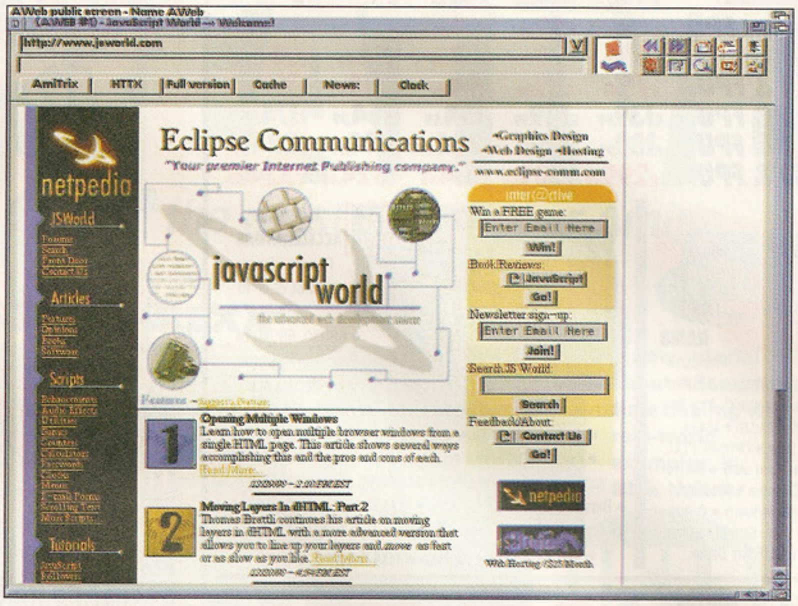
Paul's Javascript Examples page illustrates a few of the things which Javascript is capable of.



At Javascripts.com you have to register to gain access to the script library, but it is huge



The Javascript Source is another good place to visit for example scripts.



Javascript World looks an absolute treat, but there's a real bias towards DHTML and other technologies which have yet to appear on the Amiga.

You can also use Javascript to check data input into forms on your website. For example, you could have a script that tests whether an email address is likely to be accurate, by ensuring it contains an @ sign.

The most common use of Javascript, is in changing the appearance of text or



HotSyte includes some useful articles on the applications of Javascript.

graphics when the mouse is hovering over them. This is accomplished by using the onMouseOver command.

You can make messages appear in the browser status bar when the mouse hovers over a link by simply adding an extra element to the link:

```
<A HREF="main.html" onMouseOver="self.status='Go to
the main page';return true">Main Page</A>
```

Alternatively, using a lengthier bit of code in conjunction with the onMouseOver command, you can flip an image when the mouse hovers over it. Check out the sample code at the BigNoseBird site and you'll see what I mean (follow the MouseOver Image Flip link). This excellent site provides example scripts and it also explains exactly how they work.

If you're serious about learning Javascript, you don't necessarily need to toddle down to the local bookshop and splash out a small fortune on a hefty reference tome. If you want to become a true master of what is, after all, a powerful and complicated language then you'll need to invest a considerable amount of time and effort in doing so… but then, those who can justly claim to be Javascript experts are few and far between, and they're very much in demand as website designers.

For those who can live without being true masters so long as they know enough to get by, there are a number of excellent resources online. If the Netscape developers' reference document seems a bit dry, you could always try Special Edition: Using Javascript, which is far more accessible and represents virtually a complete book on a website.

JAVA ON THE NET

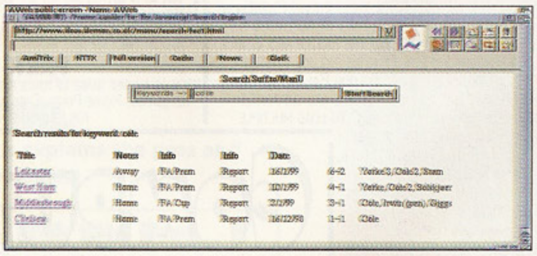
If you're feeling lazy though, you'll be pleased to know that you don't need to actually learn to write Javascripts in order to use them. There are plenty of places from which you can download ready-made scripts.

Javascripts.com requires you to register to enter, and they'll automatically subscribe you to their weekly email newsletter. However, the site is absolutely full of scripts. The vast majority are utterly useless, being nothing more than poor password protection scripts created by bored teenagers, the Javascript equivalent of an *Amos* 'Hello World' program. Some, however, are very good.

One thing to watch out for is the fact that the site uses absolutely colossal listings pages; we're talking about 500K or more in some cases. You'll have to be patient and it's not even worth trying to visit the site unless you have plenty of free system memory.

In the best net tradition, you could also take a look at scripts on other peoples' pages and see how they've gone about accomplishing things. Finally, it's worth visiting sites such as CNet's Builder.com. Although there may be a real PC/Mac bias, anything that relates to Javascript 1.1 should apply to *AWeb*'s Javascript implementation.

Having said that, there are differences in the ways in which different browsers handle particular scripts, so it can be a good idea to become friends with PC or Mac owners to take a look at their handiwork. This means you can make sure your scripts behave properly in their browsers too.



Here's an example of how Javascript can be used to enhance a site – this site searching tool uses code obtained from one of the many free script archives which are online.

USEFUL URLS

Paul's Javascript Examples – http://www.dse.nl/paul/amiga/javascript.html
Voodoo's Introduction to Javascript – http://rummelplatz.uni-mannheim.de/~skoch/js/tutorial.htm
BigNoseBird's Javascript – http://www.bignosebird.com/javas.shtml
Javascripts.com: http://www.javascripts.com
Cut and Paste Javascript – http://javascript.internet.com
Special Edition: Using Javascript – http://www.itlibrary.com/reference/library/0789707896/ewtoc.html
Webpedia: Javascripts (watch out for the Java applets sprinkled in among the Javascripts, though) – http://www.webpedia.com/scripts/javascript/
HotSyte: The Javascript Resource: http://www.serve.com/hotsyte/
Javascript World – http://www.jsworld.com/
ITR.org – http://www.irt.org/script/faq.htm
Netscape's Original Java Reference Site – http://developer.netscape.com/docs/manuals/communicator/jsref/index.htm

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68040/25 & FPU	£139.99	£149.99	£154.99	£164.99	£174.99
68040/40 & FPU	£189.99	£199.99	£204.99	£214.99	£224.99
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CREATIVE

The indispensable guide to getting the most out of your Amiga



Being the creative one on the team, I get to write this bit, although I don't think there's much that's arty about it.

Still, two new tutorials should keep you tech-hungry Amiga fans out there happy. I know we'll get flack about our Banging the Metal tutorial, but it should build into the definitive reference guide to the AGA chipset.

As for ARexx, we get lots of letters from people asking how to get one program talking to another easily and this, my friends, is the best way of doing it.

Anyway, let's hope I don't have to stand here looking sheepish talking to you next month. I'm only a poor crayon pusher and I don't really know the wrong end of an Amiga from the right end. Wish me luck as I attempt to delve head first into Simon's 68K assembler source code then...

Colin Nightingale

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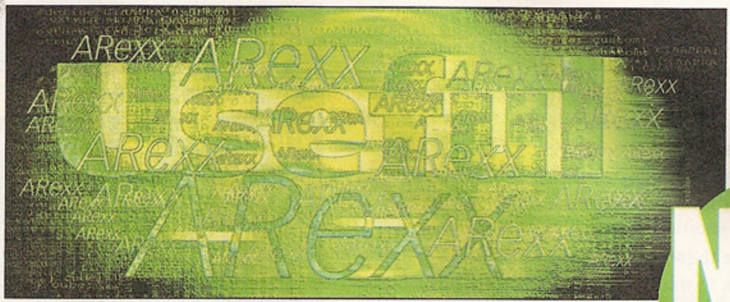
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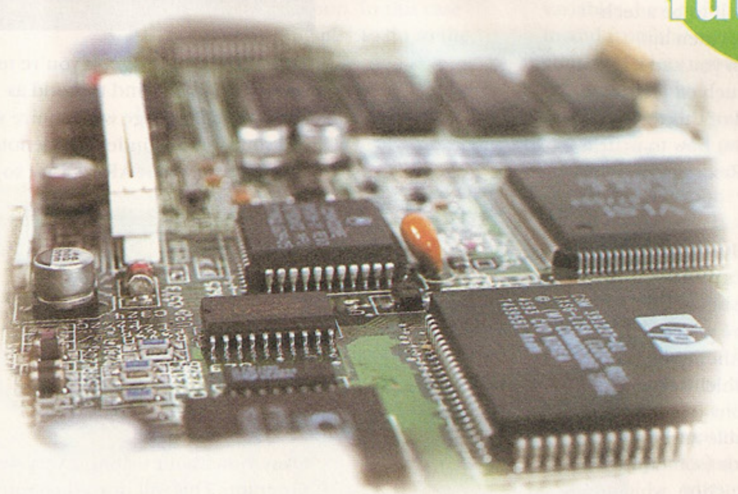
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A new tutorial about ARexx, this time dealing with real-world examples, by **Nick Veitch**.

NEW Tutorials



Another new tutorial, this time by **Simon Goodwin**, about the core of your Amiga – for advanced readers only!

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What are frames?

Are frames worthwhile? Neil Bothwick explains why they are and they aren't.



Useful ARexx

In the first tutorial in this new series, Nick Veitch introduces you to the basics of ARexx programming.

NEW Tutorial

Contents

Make sure you don't miss a tutorial in this series. Call our subscriptions hotline on 01458 271102.

As you all probably know, ARexx has formed part of the Amiga's software suite since it was incorporated into the Workbench disks back with release 2.04. You may have seen mentions of ARexx scripts or even run one or two, but the vast majority of people still don't know how to actually write one.

This is sad because there's so much you can do with ARexx to make your life easier and your computer experience more fun and productive, and it really is quite simple, even if you don't consider yourself to be a tech-head. If you've ever written an AmigaDos script then you can write an ARexx script – it's much easier, if anything. By the end of this tutorial I aim to have shown you how to write a simple and useful ARexx program.

BASICS

To achieve this you'll have to understand the basics of ARexx. An ARexx program consists of lines of instructions which are processed in sequence. The lines themselves consist of variables (labels which relate to and store values), functions (something which acts on a variable and returns a value) and commands (something which issues an instruction, which does something). Operators are also used to perform maths and comparisons.

Variables are pretty much the key to any program you're likely to write. Unlike other languages, ARexx doesn't really care how you label variables, or that you label them in a specific way.

A variable is usually initially set to a specific value with the "=" statement, as shown here:

```
page = 4
```

This stores the value 4 in the variable labelled "page". You could also have:

```
page = `index`
```

which stores the text "index" in the variable labelled page. If you're used to *BASIC* you might find this odd as usually the language will require you to call your variable index$ to denote a string variable, but ARexx isn't so fussy.

> "...there's so much you can do with ARexx to make your life easier and your computing experience more fun..."

A PROGRAM

Okay, how about writing a very simple program? This will introduce you to a few commands, some arithmetic and the general structure of an Arexx program. First, see listing 1.

The first line is a comment and is required by ARexx. This encourages you to write programs so that you, and others, will remember what they're for. The comment starts with "/*" and ends with "*/". ARexx won't try to evaluate anything between the two so you can use it to write comments. You can use this at any time in an ARexx program.

The second line contains our first command. SAY is rather like the *BASIC* command Print. It simply outputs whatever follows to the console or Shell window. In this case it prints the string



ADVANCED USERS

This tutorial will be going on to some useful and advanced ARexx topics, but we must explain the basics first. If you're an advanced ARexx programmer, you might want to miss out some of the tutorials and rejoin us later in the series.

THINGS NOT TO CALL YOUR VARIABLES

Although ARexx is pretty good about variable names, there are a few conditions. Firstly, you can't start a variable name with a number. Secondly, you, and ARexx, will get extremely confused if you name a variable after a function, command or function name.

Remember that you can use long names and the underscore symbol to make variable names easy to identify: First_word_of_the_sentence is a valid variable name and clearly identifies what it contains. Don't make them too long though, or your code might get a bit wordy.

Finally, variable names aren't case sensitive so boxer, BoXeR, BOXER and bOxEr are all the same variable as far as ARexx is concerned.

which follows it. PULL is another command which accepts input from the console. When you run this program, after the SAY command has been processed ARexx will wait for you to type something and press return. It'll store this string in the variable "name".

> Unlike other languages, ARexx doesn't really care how you label variables, or that you label them in a specific way.

Listing 1

MULTIPLICATION TABLES IN AREXX

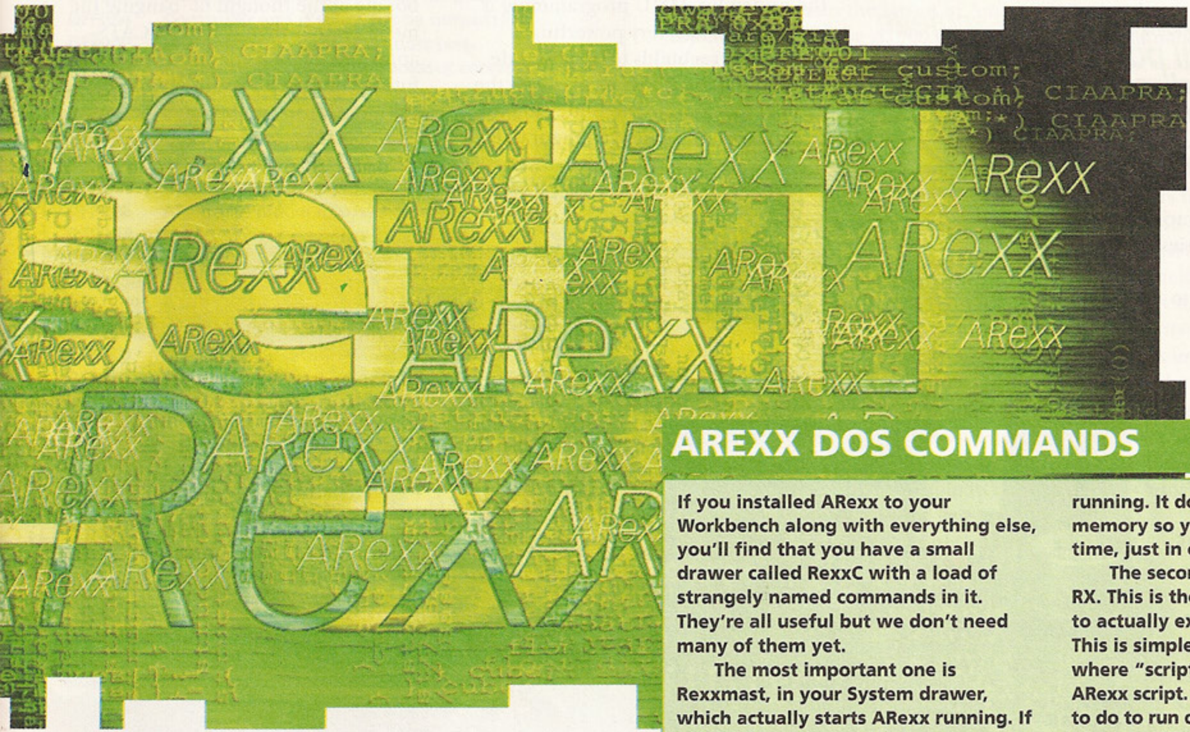
```
SAY `please enter your name `
PULL name
Say ` Okay ` name `, which times table do you want to see?`
PULL multiplicand

DO multiplier = 1 to 10
   result = multiplier * multiplicand
   SAY multiplier ` times ` multiplicand ` is ` result
END
```

OUTPUTTING VARIABLES

The next SAY command once again outputs text to the console, but with a difference this time. We're not only outputting a simple string, we're also outputting the value of the variable "name". The variable label isn't surrounded by quotes so ARexx knows it's a variable and not to just literally output the word "name" on the screen. You don't need to add any special formatting commands.

Once again we use the PULL command to accept a value from the user, this time a number. As we said before, ARexx doesn't need to be told specifically that it's going to get a number because it's happy with whatever you type in.



The next part is very important and it's a structure you'll use a lot in any program you write. This is a DO loop. The DO command is very powerful and can be used in many different ways, but in this example we'll be using it as a simple loop, rather like a *BASIC* "FOR… NEXT" loop.

The first line tells ARexx to set the variable "multiplier" to one and to repeat the loop, incrementing the value of the variable until it's equal to 10.

Skipping forward a few lines, we get to the END statement. This simply marks the end of the DO structure and tells ARexx to go back to the beginning, the DO statement, and go through the loop again. When the variable reaches 10 the loop will be finished and the END statement will be ignored.

ARexx will then continue to process anything after the loop. In this case there isn't anything else to do so the program will just stop.

The lines between the DO and the END statements do the actual work. The first of them performs the maths (where the * is used to denote multiplication) and stores it in the variable called "result". The second uses the SAY command to simply output the results of our multiplications in an easy to understand way.

AND THERE'S MORE…

That was a very simple program but now you understand the simple use of variables, how to input and output data to and from the console and how to construct a loop, you could write some very useful code.

For example, you could try adapting the program to, say, input a particular sum of money and a number of years and then use the program to calculate the total compound interest that would accumulate in that time.

I'll see you again next month when we'll take a closer look at mathematical operations, string operations and when we'll write another ARexx program.

AREXX DOS COMMANDS

If you installed ARexx to your Workbench along with everything else, you'll find that you have a small drawer called RexxC with a load of strangely named commands in it. They're all useful but we don't need many of them yet.

The most important one is Rexxmast, in your System drawer, which actually starts ARexx running. If this isn't run in your startup-sequence, or at some time after you've booted up your machine, you won't be able to use ARexx at all, never mind write any scripts for it.

To check that it's running, you can open a shell and type: `rexxmast` **If it's already running you'll get the response:**

`Rexxmast:task is already active ***`

and all is well and good. If not, you'll need to insert the Rexmast program in your user-startup or bung it in your WBstartup drawer to make sure it's running. It doesn't take up loads of memory so you should run it all the time, just in case.

The second useful DOS command is RX. This is the command which you use to actually execute an ARexx script. This is simple to use: `RX script.rx` **where "script.rx" is the name of your ARexx script. That's it, so all you have to do to run one of your own scripts is to open a Shell, type RX and the name of your script and press return.**

The last of the commands we'll deal with now is HI. It's an acronym for Halt Interrupts and, quite simply, it halts all ARexx programs in their tracks. I mention this only because if you make a mistake and want to stop a program, this is sometimes the only way to do it if it's gone badly wrong.

It may still be necessary to reboot the machine, but at least you'll be sure the script isn't doing naughty things to your hard drive at the time.

Banging the Metal

Simon Goodwin's new, advanced tutorial focuses on the unique Amiga custom chips.

NEW Tutorial

Contents

This new series for advanced users explodes the myth that only hackers and lamers program the Amiga custom chips. It reveals and explains things only possible if you have an intimate knowledge of the Amiga custom hardware and program it directly. Each month, files on the *AFCD* support and extend the tutorial on these pages.

Banging The Metal isn't a charter for cryptic, unfriendly programs. We're not afraid of Workbench icons and high-level programming languages, freely mixing ARexx, *Blitz*, HiSoft *BASIC*, Shell scripts and *SuperBASIC* to get the job done. Our examples ask the operating system for resources before merrily bashing away at them.

> ...the easiest way to achieve the full potential of every Amiga is to talk directly to the custom hardware...

I've nothing against *C* programmers, function libraries and retargeting, but the easiest way to experience the full potential of every Amiga is to talk directly to the custom hardware – banging the metal, as the hackers and their detractors put it.

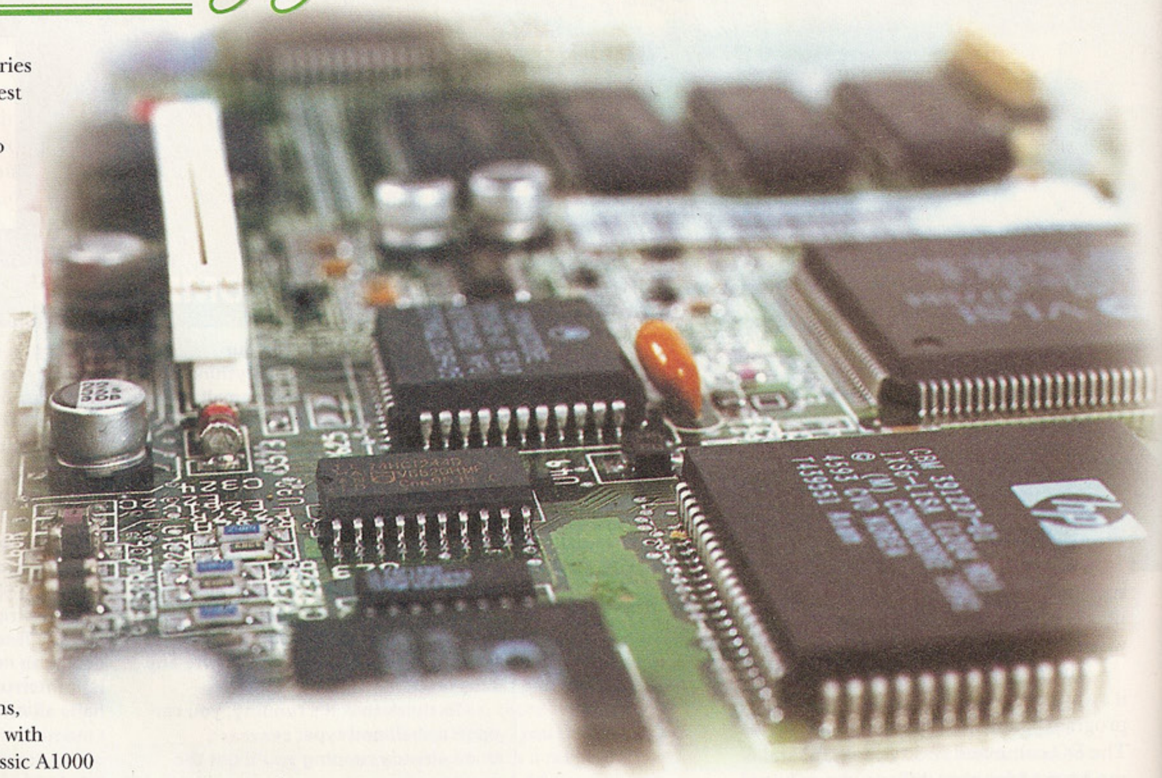
You gain deep insight into the Amiga's strengths, with less to learn and remember than if you diverted everything through the operating system.

The *Amiga Hardware Reference Manual* is a fraction of the size of the ROM Kernel manuals, yet it unlocks all the custom chips' potential. This series goes beyond Addison Wesley's Third Edition, adding full details of the AGA chipset extensions, yet examples are compatible with Amigas ranging from the classic A1000 to the A4000/'060.

TASTY TREATS

In coming months I'll give simple custom chip code to synthesise real-time stereo music with harmonies more precise than any MIDI sequence. I'll illustrate direct Memory Management Unit access; AmigaOS has no 'official' way to do this, but once you understand the principles, MMU programming is quite simple and very powerful.

The series builds up to a tour de force, using the Blitter to program the Copper to program the Blitter to generate a host of new, configurable graphics modes needing a lot of dedicated hardware on any lesser micro. The metal-bashing version renders over 110,000 flicker-free images a second, using no CPU time at all.



HERITAGE

This series courts controversy. I can hear the blood of many ex-Commodore developers, certified or otherwise, boiling at the thought of 'banging the metal', rather than using the CATS-approved methods designed to ensure future compatibility with mythical triple-A chips, Hombre and the rest. As a former registered developer, I could see the appeal of writing applications in a portable, future-proof way, but the fact is that portable applications for future Amigas are best recoded for QNX. We're assured that Classic Amiga

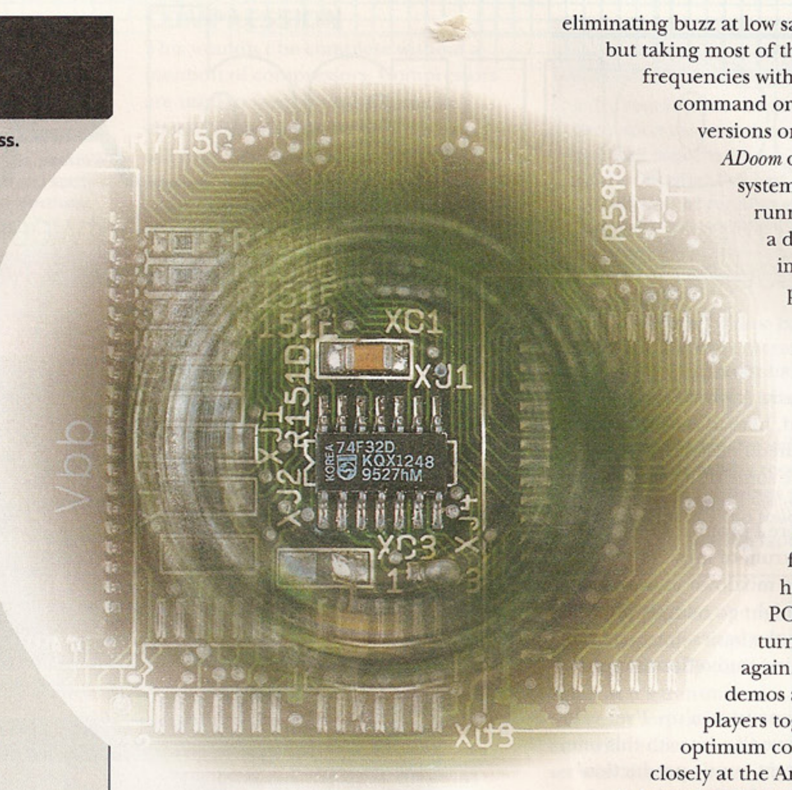
Amiga Custom Chip Memory Map

Chart of major Amiga chip registers by hex address. *AFCD38* includes a full list.

Address	Complex Interface Adaptor B
BFD000	Printer and serial handshaking.
BFD100	Floppy disk control signals.
BFD200	Input and Output Port directions.
BFD400	CIAB timing registers A and B.
BFD800	Horizontal sync event counter.
BFDC00	Spare synchronous serial port.
BFDF00	Last CIAB register (control B).

Address	Complex Interface Adaptor A
BFE001	Miscellaneous control signals.
BFE101	Bi-directional 8-bit parallel port.
BFE201	Input and Output Port directions.
BFE401	CIAA timing registers A and B.
BFE801	Vertical display field counter.
BFEC01	Keyboard clocked serial port.
BFEF01	Last CIAA register (control B).

Address	Amiga Custom register areas
DFFF00	Agnes/Alice dummy blitter register.
DFF002	DMA channel and blitter status input.
DFF004	Vertical and horizontal beam position.
DFF00A	Mouse and joystick digital input bits.
DFF012	Paula analogue potentiometer inputs.
DFF018	Serial port data and status inputs.
DFF01C	Interrupt enable and request inputs.
DFF020	Disk data address and transfer length.
DFF030	Paula serial data and format outputs.
DFF034	Controller and display strobe outputs.
DFF040	Blitter control, data and addresses.
DFF080	Agnes/Alice Copper co-processor controls.
DFF08E	Location and timing of display window.
DFF096	DMACON Direct Memory Access control.
DFF098	CLXCON screen collision control register.
DFF09A	INTENA enable up to 15 interrupt signals.
DFF09C	INTREQ request output for 15 interrupts.
DFF09E	ADKCON Paula audio, disk and serial setup.
DFF0A0	Audio control registers for four channels.
DFF0E0	Bitplane pointers for up to eight planes.
DFF100	Denise/Lisa bitplane controls and data.
DFF120	Sprite control and address registers.
DFF180	Denise/Lisa colour palette registers.
DFF1C0	Display fetch and position controls.
DFF1FC	FMODE Lisa AGA 32-/64-bit graphics fetch.



code will remain supported by incorporating real Amiga chips on an InsideOut card, or through the roundabout route of using *UAE*. Either way, the custom chip interface will remain accessible.

> *This is another apparently gratuitous feature of the Amiga design – even the power light is programmable!*

Meanwhile, every single Amiga owner has the full set of custom hardware: the main three-chip multimedia set, implementing scrolling overlaid colour displays, stereo sound, controller, disk and serial interfaces, plus two CIAs, or Complex Interface Adaptors, providing extra inputs, outputs and timing signals. This deserves intimate examination.

PEEKs AND POKEs

The table illustrates the layout of Amiga custom chips from the A1000 to the A4000. A more detailed list, from OCS to AAA, is on the CD. The consistency of this layout explains the hardware compatibility of every Amiga.

Custom chips are 'memory-mapped', controlled and monitored by writing and reading values at addresses containing custom chip hardware registers rather than conventional memory. Reading memory or registers is referred to as PEEKing, while writing is referred to as POKEing, named after *BASIC* keywords. *AFCD38* includes extended PEEK and POKE commands which work in the Amiga Shell.

Unlike RAM, which can be freely read or written, or unchangeable ROM, some custom registers change as you read them, while others can only be written. The three main chips, Paula, Agnus and Denise (Paula, Alice and Lisa on AGA), share addresses, so one write might go to several chips. In general you can treat them like one big chip, as they would have been made if a large enough package was available, but remember that what you write may not be what you read back.

These registers are discussed in more detail later in this series. PEEKs and POKEs are the essence of custom chip coding and can be issued directly from the Workbench or Shell.

SOUND TO LIGHT

POKE CIAA 0 2 controls a powerful facility only available by direct chip access. This POKE controls the audio filter which smooths off sound, eliminating buzz at low sample rates but taking most of the high frequencies with it. Try this command or the icon versions on the CD with *ADoom* or some other system-friendly game running and enjoy a dramatic improvement in presence.

Storing 2 in the first CIAA register ($BFE001, at offset 0) changes the voltage on pin 3, disabling the filter hardware. POKE CIAA 0 0 turns the filter on again. Some games, demos and sample players toggle this for optimum contrast. Look closely at the Amiga's power light; its brightness changes as the filter is toggled. This is another apparently gratuitous feature of the Amiga design – even the power light is programmable!

This comes in dead handy for signalling the progress of the self-test sequence, indicating faults found before the main display is working. This enhancement was added after some A1000 users found the fixed filter made music sound dull and lifeless. Later Amigas used a spare bit from the CIA port to switch the filter, with a connection to the power light subtly indicating its state.

Our example PEEK reads a memory address rather than a register. PEEK LONG lib exec 62 reads the long word at offset 62 in exec.library. This location records the upper bound of chip memory which is found when the Amiga starts up.

The A1000 shipped with 256K of memory for custom chip graphics, sound, disk and co-processor instructions. Modern Amigas have boosted this eight times, up to 2Mb, so that programs can tailor requests for scarce chip RAM with this PEEK. The CD icon version displays results in decimal and hex.

NEXT MONTH

The table on this page shows how the custom chips fit together in memory space, but the way in which they share time is even more interesting. Dozens of 'DMA channels' arbitrate between the chips so they work together synchronously, rather than getting in one another's way, and that's going to be the theme of next month's Banging the Metal tutorial.

Sound Advice

A good mixdown can make the difference between something that sounds like a dodgy demo and a professional product, says **Tony Horgan**.

Contents

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

Talk about making a rod for your own back! As you'll have noticed, here at *Amiga Format* tutorials are scheduled several issues in advance, unlike some other mags I've known. Anyway, we seem to have arrived at the part where I promised to cover the whole spectrum of music production and mixdown in two pages. Some people might go on a six month course to learn the basics, or spend half a career sweeping studio floors to pick up the skills...

Okay, it's time to own up. I've overstretched myself a bit with this one, seeing as the term 'music production' has infinite scope for discussion, so for the benefit of us all this instalment is really going to concentrate on the mixdown part.

> "Too much treble can be painful to listen to, while a bass-heavy mix can be too much for an average hi-fi..."

With that settled, let's first define 'mixdown'. Mixdown is the final part of the process of making a record, as far as studio activity goes at least. It's where you take all the component parts of the record and mix them together to create a stereo master recording from which millions of CDs or 12" singles can be duplicated. In order to make the most of the limited space we've got here, rather than attempt a mixing masterclass (which I wouldn't really be qualified for anyway), this is more of a sequence of tips and pointers.

LOST IN MUSIC

One of the easiest mistakes to make is to emulate this anecdote I was once told, in which the man in charge of Pink Floyd's live sound asked Roger Waters how they wanted the band mixed, to which came the reply, "Make everything louder than everything else."

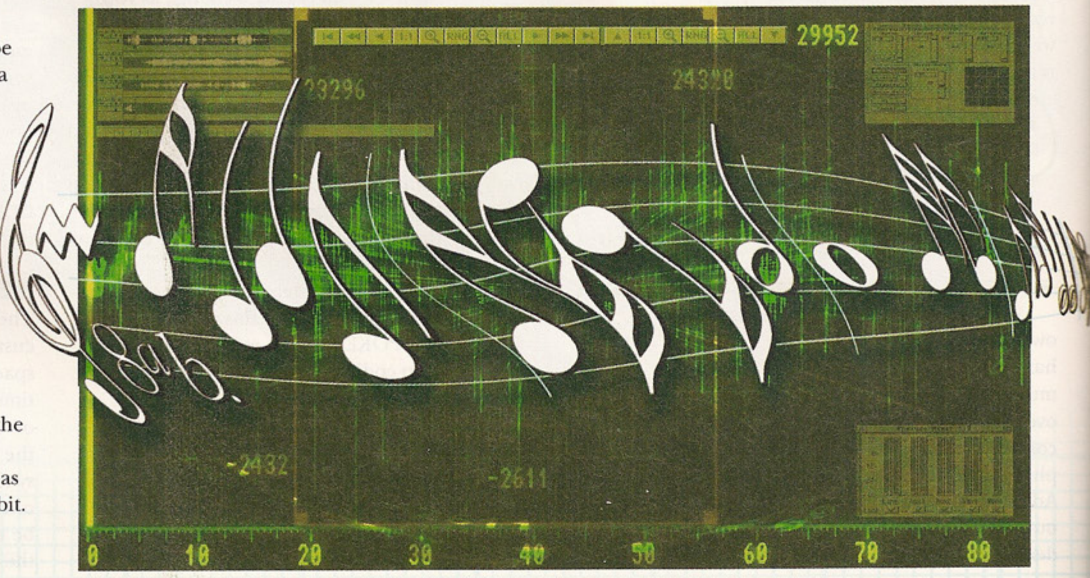
It's an easy trap to fall into when you're trying to balance up all the different sounds in your music. You notice that you can't hear something as well as you'd like, so you turn it up a bit. Then the next most quiet part disappears so you turn that up a bit, and so it goes on until you've got everything pushed into the red and you're back where you started, only with lots of distortion this time. Use your ears carefully to try to find what's actually too loud, rather than too quiet, and turn that down a bit.

Another reason for a sound becoming lost in the mix is that it sits in a frequency band used by another, more dominant part. One way to approach a mixdown is to ensure that each sound has its own space in the frequency spectrum. Although a good mixer with sweepable mid-range EQ will allow you to 'aim' sounds at different frequency bands, this is really something that should be sorted out as you compose, choosing sounds that sit well together rather than ones which fight each other for your attention.

THE EQ JOB

One of the most important things to get right is the EQ, both for separate sounds and the overall mix. When you're making EQ changes, as with volume, everything seems to sound better with more EQ boost, rather than less. This makes it easy to end up with a final mix that's all top and bottom with nothing in the middle. Too much treble can be painful to listen to, while a bass-heavy mix can be too much for an average hi-fi to handle.

There are lots of factors that can conspire to make the EQ job quite a difficult task. First of all, remember that the frequency response you get from your amp and speakers will differ to that of any other sound system. Also, the acoustics of the room in which you are mixing will have an effect. Some rooms will be more 'boomy' than



others. Try hanging up sheets or clothes to break up spaces between parallel walls. Also, something as seemingly minor as your seating position relative to the speakers can make a big difference to how things sound.

One way to help keep your mix on course is to use a well produced commercial CD as a reference, channelled through the same amp and speakers. Flicking between the output from your mixer and the CD will highlight differences in EQ, stereo imaging and general clarity. Make sure the volumes of each are well matched, otherwise the louder of the two is likely to sound better regardless.

STEREO SPARKLE

In small MIDI set-ups, achieving a good stereo image can be a problem. One of the easiest ways to broaden out the picture is with a stereo effects processor or two. I mentioned the £100-ish Zoom 1201 multi-effects processor last month, and I've just mentioned it again. That's because it's very good at putting a bit of bouncy stereo gloss onto all kinds of sounds. At that price you could probably then add another couple when your bank balance permits.

You can do pretty much what you like with stereo panning (in fact, you can do exactly what you like as it's your music) but bear in mind that if you pan any one sound too far to one side, especially if it's loud or particularly bassy, it could sound uncomfortable when played back through headphones.

MONITORING

Replaying your final mix on a range of different systems is highly recommended, to the point that it's virtually essential. The portability of your master recording will depend on the actual format you've recorded it on, but do your best to pump it through everything from a £50 portable cassette player to a car stereo and the biggest sound system you can find. When played on a big system, you might find that you've got all kinds of rogue frequencies playing havoc in the depths of the bass end. Likewise, the bassline and kick drum might not even register on the little portable, which would leave the rhythm languishing, devoid of a spine.

One test you can run in the studio is headphone monitoring, which will often show up details and imperfections that your speakers had masked.

Playing your songs back through as many different speakers as possible will help you spot any imperfections.



COMPRESSION

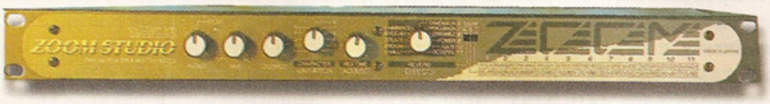
This wouldn't be complete without a mention of compressors. Compressors are used to keep sound volume in check. Virtually any bit of music you buy will have been compressed at some stage, and in many cases it will have been compressed a number of times (at mixdown, at the duplication stage and, if it's on the radio, it'll be compressed again as it's transmitted). A compressor will react very quickly to volume peaks and will reduce them by the amount you set with the knobs on the front. The result is that compressed music generally sounds more 'punchy'.

A proper chat about compression isn't appropriate for *Amiga Format*, but its sister mags *Future Music* and *The Mix* have covered the subject in detail in past issues, so check them out for more info.

That's it for this month, but I'll be returning to more Amiga-specific subjects in the follow-up to this series, which will be coming soon.

Tony's Tips

- **Try running your entire mix through a very subtle reverb to help gel it all together.**
- **Despite what I've just said above, be cautious of running your entire mix through an effects unit. If the unit isn't very clean it could dirty up your track and undo a lot of your hard work.**
- **To check the volume balance of your mix, turn the master volume right down to number 1. If you can still hear everything properly, the mix is good.**
- **Turn up the master volume and listen from a nearby room. This should highlight things such as a kick drum that's too loud or quiet, or any other glaring faults.**





The Zoom 1201 multi-effects unit (above) gives impressive results for a very reasonable price.

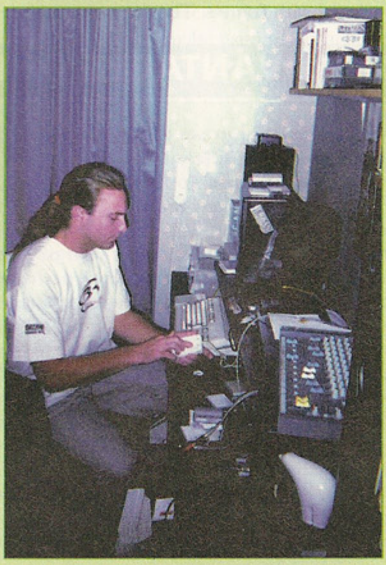
QUICK FIX BOXES

There's no shortage of gizmos designed to magically fix your mix, and you don't have to pay through the nose for the cheaper ones either. The fact that every big commercial studio will have at least one of these could be seen as evidence that they're worth using. On the other hand, it could just be that no owner of an expensive studio can resist the temptation of a magic box that costs less than £500 and promises to make everything sound 20% better.

We're talking about aural enhancers, which you can pick up for just over £100. They do various things, such as adding a very slight time delay between high and low frequencies, generating super-harmonics of existing high frequencies and sub harmonics of the bass, along with various other bits of jiggery-pokerey. Whether or not they really do make a difference, aside from making things a bit louder or adding some top and bottom EQ, I'm not so sure.

My thinking is that unless you've run out of gear to buy, you could probably spend your money better elsewhere, if only to avoid the parallel with Volvo drivers who, it's said, drive with less attention to what's going on around them because they've got 101 safety devices built into their car. The parallel is that you'll start to rely on your magic box to fix things for you, and as a result you won't develop your own ears and hone your mixing skills as you otherwise would.

Having said that, a lot of people swear by them – Aphrodite uses one and he's doing fine.



Our man Aphrodite, hard at work.

Using HTML

Neil Bothwick puts you in the picture about frames.

ON THIS MONTH'S CD

AFCD38:-In_the_mag-/Using_HTML

Contents

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When frames were first introduced by Netscape they became a fad; everyone wanted frames on their site, even though the majority of browsers didn't support them. Now that almost all browsers can handle frames and the initial obsession has worn off they're used a bit more sensibly, although they can still cause problems if they aren't handled correctly.

WHAT ARE FRAMES?

Until now we've only looked at displaying a single document in the browser window. Frames are a means of splitting the window into a number of smaller sub-windows, each displaying a different document. There are two main benefits to this. Firstly, you can set up part of the display with items that you want on screen at all times, like a menu bar or banner, and have the text of the page scrolling in a separate frame.

Secondly, you can reduce download and rendering times. Using the table method of displaying a menu bar discussed last month, the whole page, including the menu bar, has to be downloaded before the browser can render it. With frames, only the part of the page that has changed needs to be downloaded and it can start to be displayed as soon as it starts to download, rather than waiting for the complete table.

However, there are disadvantages associated with frames. They're more sensitive to individual browser setups than any other layout tool. See the boxout for the sort of problems that can occur with frames.

DISADVANTAGES OF FRAMES

Every browser setup can display the same HTML differently. In some cases the differences are trivial, but with frames they can be immense. For this reason it's important to test a frames site on as many browser configurations as possible; not only different browsers but different screenmodes too. That menu bar down the side of your page, sized to fit a column of image buttons, may look perfect on your 800x600 screen. Try viewing it on a 640x480 or 640x256 screen and you may find the column of buttons is taller than the screen and the browser has added a scrollbar to the frame, completely messing up your previously ideal layout.

Another minefield for frames users is the behaviour of the standard browser navigation buttons. These are designed to work on the whole window – if the HTML in one of the frames is changed and the user presses reload, the change may not show up if only the top level page is reloaded. All of this should be carefully considered before you decide to use frames.

THE TOP LEVEL

As a framed display consists of several HTML documents in the same window, only the "top level" page contains formatting and links to the frames to be displayed. Here's a basic example:

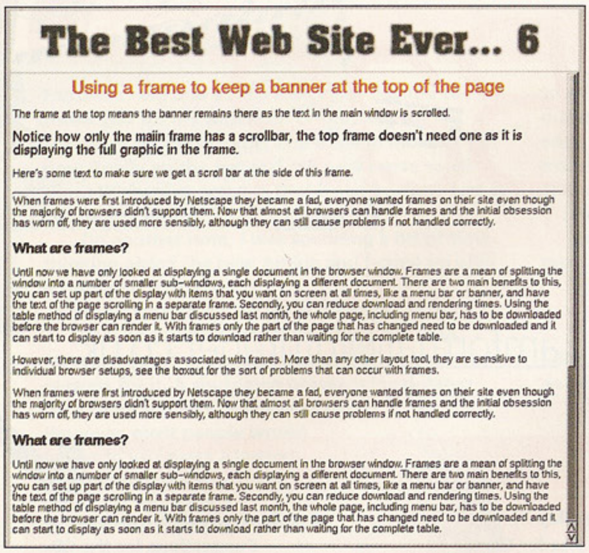
```
<HTML>
<HEAD>
<TITLE>Our first attempt at frames</TITLE>
</HEAD>
<FRAMESET ROWS="80,*" COLS="100%">
   <FRAME SRC="banner.html" NAME="banner">
   <FRAME SRC="main.html" NAME="main">
</FRAMESET>
</HTML>
```

The first thing to notice is that there's no <BODY> container; this document has no displayable content because it simply sets up the frames used to display other documents. The first new tag is FRAMESET, which informs the browser of the number and size of frames. In this case we've split the browser window into two rows – the first is 80 pixels high and the second occupies the rest of the window. The size can be given in either pixels or as a percentage, although you'd normally use pixels when using a frame to display an image of a known size.

The * has the same meaning as with table sizes – it represents an equal portion of the remaining area. For example, <FRAMESET ROWS="100%" COLS="*,3*,*"> would split the browser window into three columns, with the centre one three times the width of the other two.

For each frame, you specify its contents and other attributes with the <FRAME> tag. The available attributes are:

SRC	**The URL of the document to be loaded into the frame.**
NAME	**A name for the frame, used in links.**
FRAMEBORDER	**The size of border to give the frame, in pixels.**
MARGINWIDTH	**The amount of space to leave between the sides of the frame and its contents.**
MARGINHEIGHT	**The amount of space to leave between the top and bottom of the frame and the contents.**
NORESIZE	**Supposed to prevent the user resizing the frames, although some browsers ignore this to retain user control.**
SCROLLING	**Determines whether a frame has scroll bars. The default is AUTO and the frame gets scroll bars if the contents won't fit entirely in the visible window. YES and NO force scrollbars on and off respectively. It's rare to find a good reason to use this.**



Our first example, using a frame to keep a banner at the top of the page.

The first example displayed a banner at the top of the page that stayed put while scrolling the rest of the page. This is useful for advertising or maintaining the "corporate image" of a page while it's being scrolled.

The other common use of frames is to provide a fixed menu bar, either at

> The other common use of frames is to provide a fixed menu bar, either at the top or the side of the page.

the top or the side of the page. My preference here is for a menu at the side as the computer screen is already too wide and too short in comparison with what we're most used to reading. Removing space from the top or bottom of the page only makes this worse. However, using a side menu still leaves plenty of options, such as the traditional row of buttons down the left side of the window or a set of tab images on the right. This helps to give the appearance of a reference book.

We've already seen that each frame contains a separate HTML document. This means that when you click on a link within a frame, the new URL is loaded into that frame. If you have a menu bar, this is exactly what you don't want. Consider this example where the main window contains:

```
<FRAMESET ROWS="100%",COLS="150,*">
    <FRAME SRC="menu.html" NAME="menu">
    <FRAME SRC="main.html" NAME="main">
</FRAMESET>
```

and menu.html contains:

```
<A HREF="links.html"><IMG SRC="links.gif" WIDTH=...></A>
```

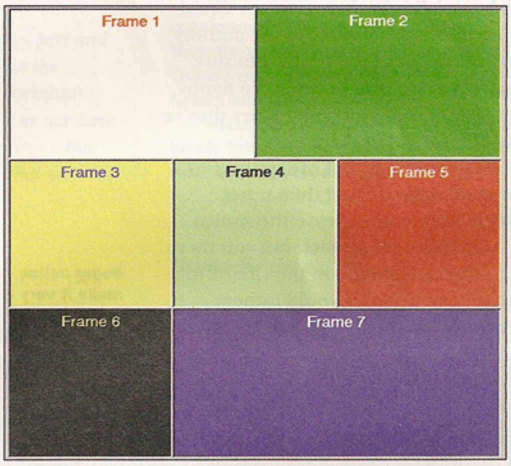
The idea is to load your links page when the button is clicked, but this will load the page into the menu frame, leaving the main frame untouched. The solution lies in the NAME attribute of FRAME and the TARGET attribute of A.

```
<A HREF="links.html" TARGET="main"><IMG SRC="links.gif" WIDTH=...></A>
```

will now load the links page into the main frame, leaving the menu untouched.

There are also four special names defined for TARGET, all starting with an underscore to avoid clashes with any names you may define yourself. They are:

_blank	**Opens a new browser window to display the URL, leaving the original page unchanged in the old window.**
_self	**Refers to the current frame.**
_parent	**Refers to the frame containing the current frame, or the current frame itself if it has no parent.**
_top	**Refers to the whole browser window.**



Nested frames are possible, but use them with care.

If all, or most, links in a document refer to the same frame, you can make that frame the default by including <BASE TARGET="main"> in the <HEAD> section. When linking to another site, make sure you include a TARGET="_top", otherwise that site will appear within a frame on your site. You may also want to include a link on your home page to escape from a frame in case someone reaches your site via a link that doesn't have a correct TARGET.

Try adding this to the bottom of your page to reload your home page into the full browser window:

```
Stuck in a frame? <A HREF="home.html" TARGET="_top">Escape now</A>.
```

There's no frames equivalent of the COLSPAN and ROWSPAN attributes, but you can create more complex table layouts by nesting frames – a FRAMESET tag can include further FRAMESET tags as well as FRAME tags. However, this can make site control and navigation even more complex and should only be used when necessary, and with great care.

STAYING COMPATIBLE

Some browsers aren't capable of displaying frames and some users have frame display disabled. In either case, they'll only see an empty window as the main document has no content other than the FRAMESET. The solution to this uses a feature of HTML where a browser will skip any tag or attribute it doesn't know about. The frames specification defines the <NOFRAMES> container to be completely ignored by any browser displaying frames – a non-frames browser won't understand this so it'll skip the tag and display its content as any other HTML. This means you can include content to be shown when frames aren't available to the user.

It's important that you use this or you risk locking users out of your site. A list of links to the main parts of your site should be considered the minimum, while some sites make full use of NOFRAMES to give frames and non-frames versions of the site. See http://www.wirenet.co.uk either online or on the CD for an example of the latter.

CHARACTER ENTITIES

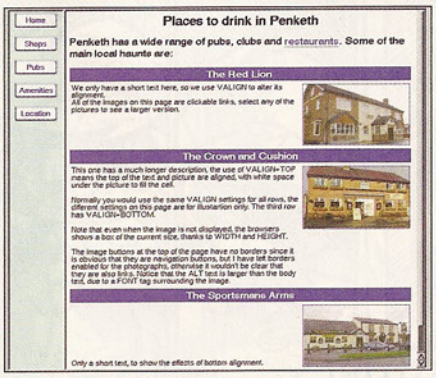
HTML is plain text, using certain characters to define tags and markup, so what happens if you want to use those characters within your text? If you have something like:

```
if a<b or c>d then
```

in your HTML, the browser will try to interpret <b or c> as a tag, not recognise it and simply show "if a d then". The solution is the character entity, a string starting with "&" and ending with ";" containing a mnemonic for the character to be used. The common ones are:

<	**<**
>	**>**
"	**"**
&	**&**
£	**£**
	Non-breaking space, used to prevent a phrase being broken over two lines – use with care
©	**© (copyright symbol)**
®	**® (trademark symbol)**
&#xxx;	**ASCII character xxx**

The full list of entities is in the HTML 4.0 documentation on the CD.



The menu example from last month, done with frames instead of tables.





Mail*Bag*

Send your letters to: **Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW** or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SHARE AND SHARE ALIKE

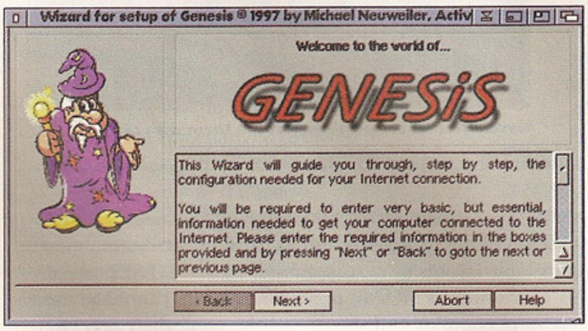
I recently decided that I'd register all the Shareware programs I use. The problem is that some programs haven't been updated for a while, or the author lives in a country I haven't even heard of. How do I know how much money I should send, if I should write a cheque or if I'm going to get any response?

I had the idea that a trustworthy company such as Epic or Power could sell registered software for the authors and take a cut of the profit. I'm sure that lots more people would be happy to send off money to companies they've used before. I bet there would be a much greater amount of registration for good software and then upset programmers won't leave the Amiga.

On different subject, can you try to put more full games on the CDs? I'm sure old companies would rather everyone got them from you than through illegal net sites. An old version of *Lightwave* would be good as well.

Paul James
South Wales

It's always tricky to know what to do if you aren't online. It's best not to blindly send cash either, because it's likely you'll never hear back. This is one of those benefits to the net that we always talk about, but the dealers in this country generally offer a variety of Shareware software registrations.


Wizard for setup of Genesis © 1997 by Michael Neuweiler, Activ

Welcome to the world of...

GENESiS

This Wizard will guide you through, step by step, the configuration needed for your Internet connection.

You will be required to enter very basic, but essential, information needed to get your computer connected to the Internet. Please enter the required information in the boxes provided and by pressing "Next" or "Back" to goto the next or previous page.

‹ Back | Next › | Abort | Help

Being online can make it very easy to register Shareware, among other things.

✗ SPARE US

- Letters about Chris Handley
- Letters about why the Reader Games weren't on *AFCD37*
- Complaints that the machines we reviewed *Napalm* on weren't representative
- Letters with no concept of spelling, grammar and coherency

SEND US ✓

- Feedback about the magazine
- Suggestions for the CD
- Your ideas for the shape of the Amiga's future
- General questions you want answered (not technical – that's what Workbench is for!)
- Comments about review scores

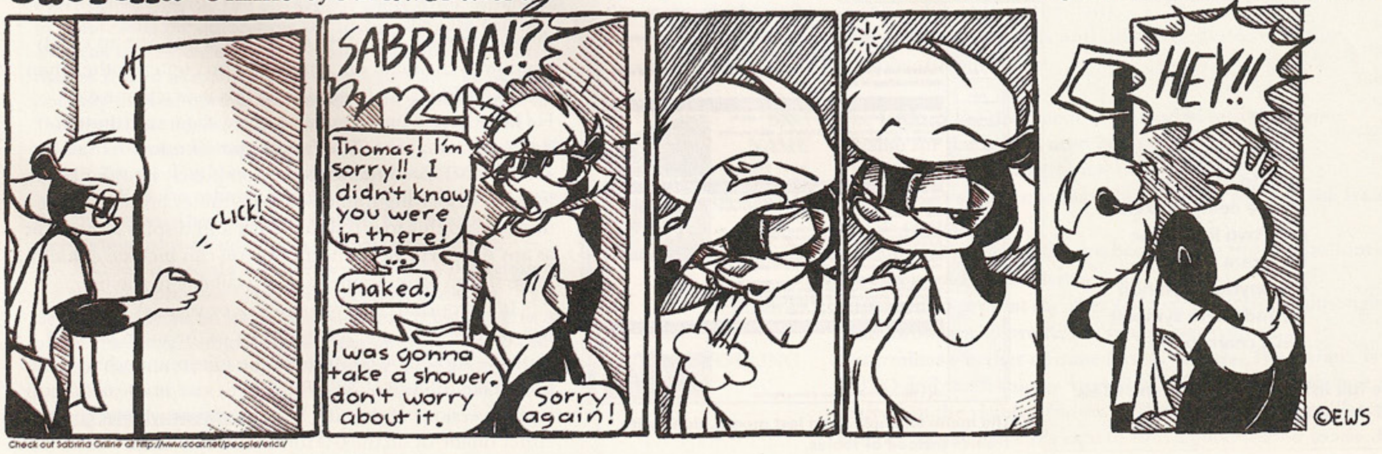
DESCENDING STANDARDS?

A small note about the review of *Descent*. Strangely, I found Nick's review of *Descent* clearly and blatantly biased and way off. How can a game that has made it to three incarnations and had its engine used or copied in the often raved about *Forsaken* be such a terrible game to play? Surely millions of game players can't be wrong and Nick right.

In fact, I'm quite sure a few PC reviewers for *Lemmings* also had a similar attitude, and as for the "textures swimming and giving you a headache", this is a well know bug that the original coders mentioned and they couldn't be bothered fixing it. Not that it removes any gameplay. Then again, if you stopped playing *ADescent* and tried



Sabrina Online by *Eric W. Schwartz* ©1998 "Now there's something you don't see everyday"



Check out Sabrina Online at http://www.coax.net/people/erics/

LOGO TO GO?

Fantastic mag and all the rest. I just wanted to thank you for the article on connecting to Freeserve. Thanks to you, and a cheap modem, I'm now finally on the net and can now prove to all those PC owning sceptics that it can be done just as well on an Amiga.

On another note, I was spending a bit of time thinking about the new Amiga and I came up with a couple of suggestions.

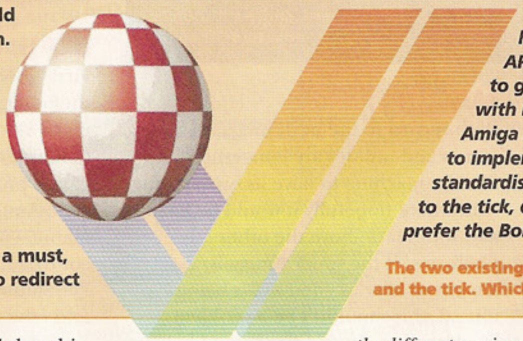
1 We all love to switch off our Amigas at the press of a button, while watching PCs take forever to shut down, but there's some good reasons for it. A shutdown prevents invalidated hard disks and loss of unsaved data. However, most people would prefer to just press a button. Fair enough. We've all seen those ATX PCs switch themselves off, so how about activating the shutdown from the 'off' switch, then leaving the computer to power down? Convenient, eh?

2 It's agreed that APIs are a must, but they must be able to redirect to as many outputs at once as possible. This would make Tony Horgan's idea of multiple monitors easy, along with multiple joysicks, printers and all manner of other things, thanks to the digital convergence plugs.

3 Please bring back the old Commodore-Amiga tick logo. I like the boing ball too, but perhaps a mixture could be used?

Sandy Brownlee
via email

I like the idea of a shutdown taking place automatically, and I'm sure it wouldn't be too hard to implement, given the right hardware. As for APIs, they're the way to go these days, and with RTG and RTA the Amiga has gone a long way to implementing standardisation. With regard to the tick, does anyone else prefer the Boing ball? I do.



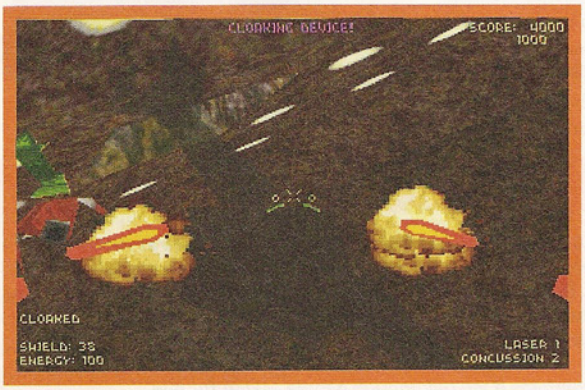
The two existing logos – the Boing Ball and the tick. Which do you prefer?

Descent v57 or *v62* you'd find that this programmer has kindly repaired the engine. In future, please try more than one version of a port and not review it based on your lack of gaming talent.

Nian
via email

Nick attempted to get Descent *working on his machine (and mine) for ages. He tried all the different versions of the Amiga port and played the one that worked. As for the gameplay style, whether or not* Forsaken *uses the same engine is neither here nor there. I have to agree with Nick's conclusion that the game is somewhat boring. What you think of it is your own opinion.*

Descent – we weren't too impressed, but do you think we're too harsh with our review scores? Let us know!



THAT WAS THEN...

With all the excitement about the new Amiga OS, and how in a year or so it'll be snapping at Microsoft's heels, it strikes me that there are one or two differences in the world between 1985 and now.

1 When the Amiga was first launched, the home computer scene was very different. There were several different platforms and Microsoft didn't control 95% of the market. Nowadays, with the word "computer" apparently synonymous with "IBM PC" in everyone's heads, has a new platform got any chance of success at all?

2 However good the new Amiga is, it's bound to be more expensive than a fast PC, at least for a while. It's a well known fact in business that most people would rather buy the cheapest option if it does a similar job, especially if most of the people they know have already done the same.

3 A couple of years ago I worked out that even if I bought a PC that was half the price of the equivalent Amiga, I'd still need to spend over £1,000 to

Continued overleaf ➡

Snippets:

I have just got myself 20Mb of web space and what better way to fill it than with Amiga (and other computer) stuff. However, there is a problem – all my friends have given up on the Amiga so I need some help from Amiga fans to help me put together the Amiga section of the site. If there are any Amiga users out there who'd like to help write for my site, please email me at agg666@yahoo.com.

Alex Key
via email

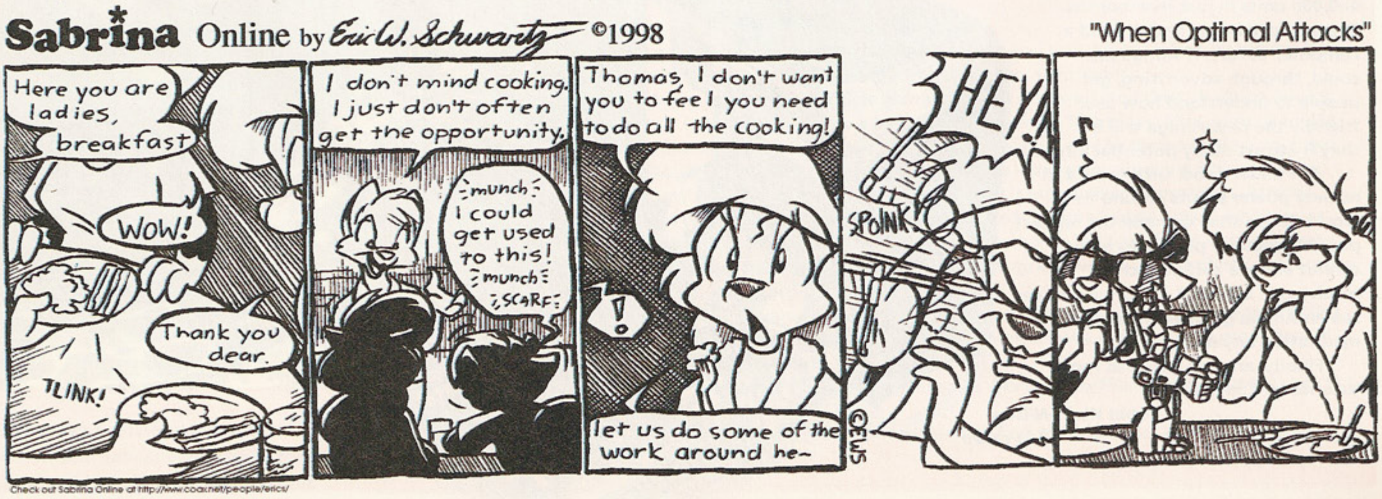
About your little adventures over the pond. When you ordered CDs and/or videos from the USA, did you know that on the order it says you'll pay $8.45 for all post/packaging, etc, with DHL WorldWide, including Europe, but that's just for within the USA. When they arrive on UK soil the tax man will charge you 17.5 VAT% and an additional £7.50 for admin fees on top of the USA charges.

The customs pay these for you to cut-down on the time it takes and then they send you nice little invoices. There's no mention about this on CD Now's website.

Please would you let your readers know this before you tell them to part with their hard earned cash.

Kes Morland
via email

Thanks for the tip, Kes.



Check out Sabrina Online at http://www.coax.net/people/erics/

replace all my existing software. When the new Amiga hits the streets the roles will be reversed – if someone has invested in PC software for several years, they'll need a lot of persuading before they change platform.

4 Regarding software compatibility, it strikes me that even the current Amiga is only lagging behind the PC as far as pure processor MIPS are concerned. This is particularly true for games – *Quake* on an '060 is a bit behind *Quake* on a P300! I know that a PPC card would make a difference, but unfortunately the software has to coded specially. However, on a PC the same code that runs on a 486 also runs on a fast Pentium.

If I want PPC speeds it means replacing most of my software, although to be honest, if I was just in the market for a games machine I'd buy a £150 N64 because even with half a dozen games I'd still save money on a PC.

I really want the new Amiga to be a success because I refuse on principle to buy anything that not only lines Mr. Gates' pockets but also makes me a typical sheep-like PC user. I want my computing to be as individual as myself, even if it puts me in a minority. I just hope the designers of the new machine realise just what a mountain there is to climb to re-establish the Amiga as a viable alternative to the PC.

Jonathan Knott
via email

A lot of points that boil down to the idea that the new Amiga will be expensive. Remember what Dr. Allan Havemose said at WoA last year: the new machine will cost under or around £500, including monitor, hard drive, CD-/DVD-ROM drive and more.



We used to be able to emulate state of the art PCs with the KCS PowerBoard, and we'll soon be able to do it again.

MAC IN A BOX

With regard to the new Amiga, as far as games and utilities are concerned I'd like the machine to have its own unique stuff where hopefully it would be head and shoulders above the other platforms. If the super Amiga is anywhere near as good as it's being touted, this shouldn't be a problem.

However, there's one thing I believe the machine must be able to do if it's to succeed and that's to be able to read and play PC and even Mac CD-ROMS, and then it must also be very easy to do, without having to search for libraries and emulators.

It should be done automatically if possible. The reason for this is pretty obvious. Take my daughter as an example. She wants CD-ROMs like *Encarta* and she also wants CD-ROMS that she can get through her *Barbi* comic and the like, which I believe play animations, etc. If the new Amiga can do this, it will alleviate the need to get a second computer or even forget about the new Amiga altogether since it wouldn't be compatible with the sort of stuff that the kids want. I hope these problems are being addressed.

Ewan J Carmichael
via email

So you essentially want PC and Mac emulation out of the box? Since Amiga Inc. have stated that their machine will emulate an x86 machine in software at high speed, it seems likely that PC emulation will be included at least. I just hope you don't expect Windows2000 to be as easy to maintain as the Amiga-native software is bound to be.

BLAH, BLAH, CONTROLLER

First, good mag, blah, blah, etc. Now to the point. If Amiga Inc. really mean to make a multimedia monster, they need to realise the restrictions put on Amiga games programmers in the control area. Amiga Inc. (or a peripheral manufacturer) need to make a controller pad comparable with the PlayStation or N64. If they don't get told now, they're bound to neglect it.

Bruce Hastings

Got your point, blah, blah. As for a controller, I really wouldn't worry about it right now.



A snazzy controller – does the Amiga need one?

MARKETING EMULATION

The other day I saw a program about the new Mac on CNN. This continues the futuristic design of the iMac, but it's a tower solution, rather than a badly designed all-in-one-without-a-disk-drive machine. It's so easy to access the inner parts of this new one – just pull a switch and it opens.

I hope Amiga Inc. are paying attention to what Apple do and their marketing strategies. Apple have sold about 400,000 units in just five months. Every fourth buyer hadn't used a computer before. If Amiga Inc. could, through advertising, get people to understand how user-friendly the new Amiga will be, they'll attract many potential buyers.

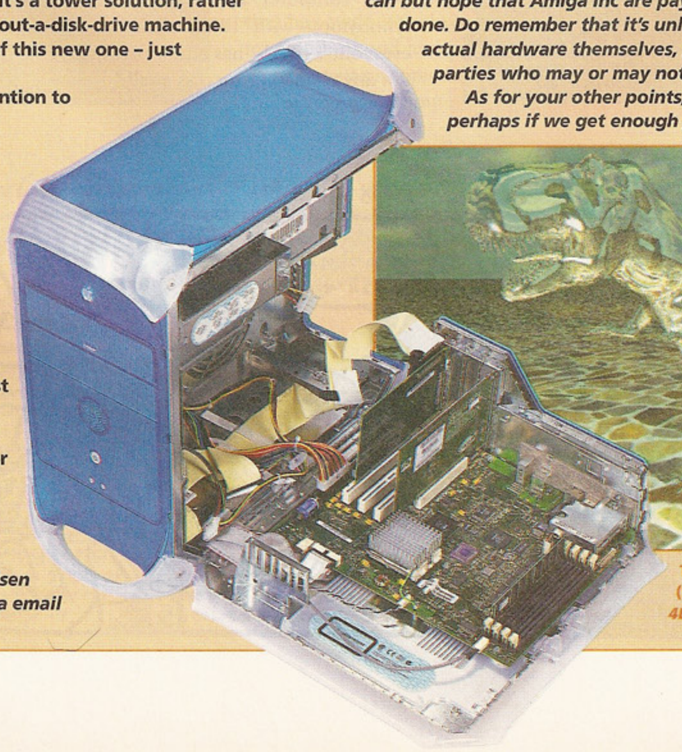
As I understand, QNX is used in nuclear power plants around the world. These sites demand the highest possible security precautions and cannot allow a software-crash resulting in a reset. I guess we'll never see an Amiga go down in a guru-meditation any more.

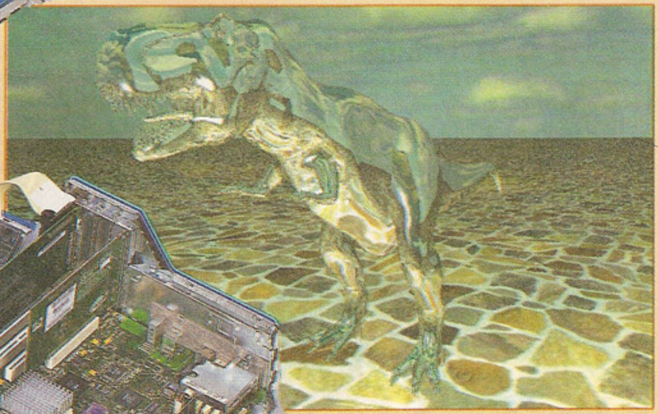
Finally, are you going to run a tutorial on *Cinema4D*?

Robin Wulff-Nilsen
via email

The new G3s are gorgeous – we have several in use here at Future and I can but hope that Amiga Inc are paying attention to what Apple have done. Do remember that it's unlikely that Amiga Inc. will be producing actual hardware themselves, preferring to leave that up to third parties who may or may not like the idea of a hinged case.

As for your other points, another tutorial on C4D? Well, perhaps if we get enough people asking for one.





The spankingly good-looking Mac G3 (left) and an equally attractive *Cinema 4D* render (above).

IN MY DEFENCE...

This isn't a rant or anything, although I'm probably entitled to that. I've kept it fairly short. I was rather saddened by some of your (presumably Nick's) reply to my letter, which was entitled "Constructive Criticism?". Despite the title, it seems that you're unable to take criticism without resorting to personal insults (the bit at the end).

People usually resort to insults when they can't back-up their argument with facts. That is not to say that personal insults aren't true, although I don't think it was in this case. It is this unjustified personal insult IN PRINT which has so annoyed me. To my recollection it is the first proper insult printed in *AF*'s letters page (a sad day) and I can only wish for a retraction, not that that it seems likely at the moment.

You seem to think my email should have been a poetic work of art, when it was in fact a quickly typed 'conversational' email just to say I thought you could improve a few things, hence the spelling mistakes (which I can't see) and incorrect english (it looks fine to me!). [That's because the errors were subbed out to make it readable – Prod Ed.]

As for your comment about my degree, it was in electronics, not English. If I was writing up a project I would no doubt spend ages checking grammar, using a spell checker, etc, but as indicated, I wasn't expecting the Spanish Inquisition.

I believe I made it clear that my criticism was "IMHO" and that it was directed at improving the mag. If my email ever appeared terse (i.e. without any platitudes) it was in an effort to keep it short. I expected the usual cheery response people have come to know *AF* for, so I'm sorry if you thought that I was trying to be nasty (certainly not!).

Next time I send any criticism to *AF* I'll make sure you don't think I'm being nasty, but my email will probably be 50% bigger.

I haven't sent in criticism before because *AF* is usually very good. The only bad review of this issue (*AF120*) is the Power Keyboard Interface one, which had almost no information content. Perhaps you had a bad day, which would make the insult a little more understandable. Perhaps. I would basically like you to take-back that insult for which I don't see any justification. I hope you are someone who can admit their mistakes – certainly, that is what I try to do. This is how flame wars start, so please let's not start one!

Rather than reply immediately, cool off (like I did) if needed, and reply to it a half to one day later. If I hadn't, my reply would have been very emotional and probably wrong.

Chris Handley
via email

We've had a lot of people send us mail about Chris Handley's letter to AF, and they weren't as nice as we were to him, but everyone's entitled to their opinion. Unfortunately Chris, a lot of what you claim as opinions are stated as facts, and thus Nick replied to them as such. It may be that we're inviting further criticism of you by printing your riposte in full (subbed again), but so be it.

INSTALLER IRRITATION

I'm writing about something that outraged me on your February cover CD. The program required something called *New Installer*. I searched through my old cover CDs until I found it. I was shocked. This was a program for lazy developers to write quick and easy install scripts. Fair enough, but the fact that the programmer was expecting the end user to pay for other people's laziness is outrageous.

Even more shocking is that the programmer of *New Installer* is offering a free keyfile to anybody who used it to distribute software. Surely a far fairer way would be for people to be able to use *New Installer* to install things for free, and then make the developers who want to use it to make install scripts pay. Anyway, I've ranted enough. Thanks for a great mag.

Lion
via email

I think it was a failed attempt to try to provide a new standard, but one obviously doomed to failure. Does the program work with the normal Amiga Technologies Installer *after all that?*

DOWN WITH FLOPPIES

1 Let's see fewer copies of the floppy disk edition of *Amiga Format* on the news stands and more copies of the CD edition. It really winds me up when I go into John Menzies and find no CD editions left, but loads of floppy editions. I think you've got the message.

2 Take a stroll to the office where *The Mix* is put together and give the editor Chris Kempster a good kick in the gob many times, hard, for his bad attitude towards the Amiga.

Apart from that, keep up the good work and come on IRC more often.

4-0
via email

1 *We're currently in the process of ascertaining whether it's worthwhile to do the floppy edition at all since the sales for it are very low these days. We'll see how it goes, but there will be plenty of warning.*

2 *I could be wandering around Future all day long with a sore foot if I had to kick everyone I suspected of having something bad to say about the Amiga. Not that it matters – we know better, don't we?*

AMIGA WHO?

I disagree with Chris Handley's complaints about the News section of *AF*. Nine times out of ten these pages contain useful information about what is going on in the Amiga world, especially useful because Amiga International are very secretive about any new developments of the new Amiga. Any other items in the new pages concern the Amiga.

For example, the Magic Carpets Mouse Rug isn't only an interesting and unique present but it's also useful and will reduce the number of mice you'll need.

Ross Whiteford
Abernethy

I included this bit about Chris Handley, although I said I wasn't going to, because of the fact that I'd just like to point out in print, like I've done many times online, that it's Amiga INC. who are developing the new Amiga. That's the company in America, not the one in Germany.

I know there have been a lot of changes over the last four years, but Amiga International have nothing to do with developing the new Amiga.

MORE MORSE

In the July 1998 issue of *AF*, under the heading 'Inspect Your Morse', you printed my letter asking for help on writing a program to decode Morse Code in real-time from radio transmissions.

My research into this problem led me to an article complete with an annotated flow chart explaining just how such a program can be written. It includes a hex dump containing 332 bytes. This dump is in Z80 machine code and there is no disassembled version and so far I've been unable to disassemble it by hand. If I could do this, I doubt my ability to convert it to run on the Amiga – programming just isn't my forte.

I'm asking you to publish my request for a programmer to write a Morse decode program. Anyone who contacts me (sorry, I'm not on the Internet) will receive a copy of the three-page article which goes into a lot of detail. The program will naturally belong to whoever writes it – all I ask for is a copy for my own personal use. Is there anyone out there who'd like to write a program for the Amiga that's not a game or a utility? If so, get in touch.

I know from the quality of reader games that there are some very talented programmers reading this magazine, and it's my hope that one of you would like to try this. Morse Code is still used a great deal in radio communication and is very much alive and in daily use.

D. J. March, 86 Henley Avenue, Norton, Sheffield, S8 8JJ. (01142) 746357.

There you go then. I'd be interested in seeing it too, but remember that there are lots of Morse-related programs on Aminet, so it'd better be good.



Reader Ads

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FOR SALE

MicroniK "Scandex" external scandoubler £50, Citizen ABC printer with colour kit, cable and driver/TurboPrint (Citizen ABC edition) £40. 2.5" hard drive tower mounting equipment, 2.5" to 3.5" caddy adaptor and 44-way 2.5" hard drive cable (60cm), never used, worth £31.90 new, sell for £18. Also 2.5" to 3.5" data and power adaptor, never used, worth £9.95 new, sell for £5. ☎ 01536 724309 or email n.thomas@ukonline.co.uk

Falcon '040 accelerator for A1200 with software and instructions, £100 ono. ☎ 01992 711204.

Magnum '030/40MHz for A1200 with 4Mb RAM only £45. Also, Power B/W hand scanner, £20. ☎ Nick 01255 821702.

Blizzard 1230IV 50MHz plus 882, 85 Euro (with 8Mb RAM, 100 Euro). From Italy ☎ 0247 9688731 or email paolo_ferro@hotmail.com from Europe.

68030 trapdoor accelerator for A1200 with 4Mb RAM and clock, £35. Will post anywhere. ☎ 0161 7975740 after 8pm.

A1200 10Mb Apollo 1230/25 accelerator, 420Mb hard drive, external floppy joysticks and joypad, tons of games, tons of software, tons of manuals. Plus magazines and coverdisks. £300 ono. ☎ 01324 870528.

A500+, 1.5Mb, 2 PSUs (25W), mouse, Arcade joystick, Amstrad joypad, A500 1Mb, modulator needing a new chip, lots of software. Swap for A1200 hard disk (170Mb+) or sell for £60 ono. ☎ 07788 985565.

Memory expansion board, 4Mb, fully boxed, fantastic condition for A1200, £20 or swap for any Aminet CDs or Amiga Classix CD. ☎ Adam 0161 2840856 (Oldham).

Complete Amiga 4000/30 system, upgraded 40MHz 3.5Gb HD, internal HD, 3.5" floppy drive, Microvitec 14" monitor, 18Mb memory, 8x CD-ROM, Citizen printer, speakers, genlock, digitizer, manuals, Workbench 3.1. Everything £700 ono. ☎ 01922 693558.

Microbotics 68030 50MHz FPU, boxed with all software, excellent condition, no SIMM (upgraded). £60. ☎ 01203 453521 (after 6pm).

Amiga games for sale. Odyssey, Timekeepers, Fears, Guardian, Street Racer, F19 Stealth, plus word processor and other games and mags. £45. ☎ 0378 861125.

CD³², network CD and cable, 11 games, CDPD 1-3, £100. Goliath 200W power supply £30. ☎ Paul 01443 223834.

A1000, original and best, as new, £50 plus post. Also A1500 7Mb, 50Mb 2091 HD, 2.0 and 1.3 via switcher, with extras, £75 plus post. ☎ 01202 256927.

External quad speed CD-ROM with Squirrel interface/software, only £45. Wizard 200W power box, £30. Black and white inkjet printer, £20. 8Mb SIMM, £10. 16W boxed speakers, £10. ☎ Duncan 01333 312715 (after 7pm).

Flight, military and naval simulation games. For full list and prices contact George Aldridge, 3 Rowan Brae, Springwood Village, Kelso, TD5 8LW. ☎ 01573 224632, email gwa@kelso.u-net.com.

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Free!

New gear: LS120, 2Mb high density floppy disk drive, 24x CD-ROM internal high quality drive, PC-Task v4.4 latest version, Workbench v3.1 ROM chips and software, OXYPatcher, IDEfix. Offers. ☎ 01745 887610.

Myst £10, Breathless £5, AB3D2 £5, A590 hard drive free. A500 half meg upgrade free. A1200 and A500, spares or repairs, free. ☎ 01253 397339.

WANTED

Mortal Kombat 2 and ATR games. No pirate copies, thanks. ☎ 01905 830015.

Monkey Island 1 or 2, preferably 2. Swap for other Amiga games. I have a lot of AGA games and some non-AGA. Call for details. ☎ 01392 876056.

Any ex-PD warehouses out there? I might purchase your collection. Phone me any day of the week after 9.30pm. Will pay reasonably. ☎ 01224 480323.

Help! I've lost disk 7 of the game Sixth Sense Investigations. A nice gift to anyone sending it to me! Write to: J. Levett, 40 Rue Gratès, B-1170 Brussels, Belgium.

MacOS suitable for Fusion. System 7.5 or greater. Email Jon at 9715525@sms.ed.ac.uk

A Level educational software required. Subjects: physics and chemistry. ☎ Mark 01703 902389.

CD-ROM drive for A600HD, plus some games if possible. Will buy and possibly collect. ☎ Bill 01689 847642 (Croydon).

Do you have a disk that will check my lottery syndicate's numbers, or details of how I can obtain one? Please help, I'm desperate. ☎ Nick 01392 206668 (Exeter, Devon).

Troddlers. Full game, will buy or swap if I have what you want. ☎ Chazz 0141 4239408.

PC-Task version 4.0-4.4 is desperately wanted. I will pay a good price with postage costs. Please ☎ 01271 813625 (North Devon, Barnstaple area) and ask for Nick. Urgent!

Dataflyer SCSI, plus SCSI interface. Must be in very good condition. ☎ 01273 493659.

A1200 Action Replay unit. ☎ 0141 5524722 (evenings).

PERSONAL

Also see the AmigaAngels document on our CD.

Knowledgeable Amiga user would like penless pals. Email danny@gespatcho.u-net.com Also, very low cost web design available. See http://surf.to/shepherd as an example.

Amiga contacts wanted to swap games and ideas. Must own A1200 and hard drive. Will reply 100%. Contact Mr. Garry Emery, 3 Scott Avenue, St. Budeaux, Plymouth, Devon, PL5 1HQ.

Amiga contacts wanted for swapping games. 100% reply. Must be very reliable. Contact Scott, 8 Shaw Crescent, Nottingham, NG15 6HT. I own an A1200.

BBSes

Send your BBS ads to the usual Reader Ads address. BBS ads will be printed for three issues.

The Forum! BBS online 24 hours, Kilmarnock, Scotland. Over 35 members, 2,000+ files available, including games, pics, utils, etc. Sysop: Jamie Maguire. Run by a software development student. ☎ 01563 540863. 36K.

Bill's BBS, Cumbria, online 24 hours (mail only between 2.30am and 3.30am), ☎ 01229 434393 or 0870 7878615. Sysop: Bill Clark. Visit http://cumbria.cjb.net, email billsbbs@cornerpub.com or bill.clark@ukonline.co.uk. Supports Fidonet. Loads of free files, games, doors, quizzes,etc. Unlimited downloads.

X Zone BBS, supporting the Amiga for over two years. Do you want the latest files? ☎ 01635 820590, 6pm to 1am, modem callers only (33.6K). Call now.

Quest BBS, Wakefield. West Yorkshire's largest BBS with over 30,000 files online, including the latest 7 Aminet CD-ROMs. Online weekdays, 6pm-6am and weekends, 2pm-6am. ☎ 01924 250388.

Moonlight BBS, Bedford, online 6pm-8am, 24 hours at weekends, ☎ 01234 212752.

Sysop: John Marchant. Email gnome@enterprise.net. Official Amiga Support BBS, unlimited downloads, very friendly sysop with excellent Amiga knowledge. Aminet online. Run by a qualified programmer who will help you out for free.

L's BBS, Kent, online 6pm-midnight. ☎ 01795-511103.

On The Oche BBS, Waterlooville, online 24 hours. ☎ 01705 648791.

Amiga Nutter BBS, Herts, online 24 hours. ☎ 01707 395414.

Arachnoids BBS, Leicestershire, online 24 hours, ☎ 01509 219031.

Bedlam BBS, Leicester, online 24 hours. ☎ 01162 787773.

Entertainment BBS, Wigan, online 24 hours. ☎ 01942 221375.

Xanadu BBS, Wigan, online 24 hours. ☎ 01942 746342.

Elevate BBS, Hants, online 24 hours. ☎ 01329 319028.

Echoes BBS, (Camberley). Line 1 ☎ 01276 502641, 56K, 24 hour. Line 2 ☎ 01276 502642, 33K, 24 hour. Sysop – Steve Barnett. http://surf.to/echoes.bbs. Latest Aminet downloads, nine online CD-ROMs, Fidonet and other mail networks. Offline reading available and free email to all members. In fact, free everything – no subs of any kind as the BBS is run for the love of the Amiga and Xenolink software.

Black Magic BBS, ☎ 01788 551719 after 10pm, over 6,000 files online.

Frost Free BBS, ☎ 01484 327196 (Slaithewaite, W. Yorks).

USER GROUPS

User group ads will be printed for three issues.

Bournemouth: Dorset/Hampshire. Anyone interested? User group contacts. Amigan, one year, seeks new/old users for chat/helping each other. Email to start, can/will post later if not online. gctshe_m@mail bournemouthandpoole-cfe.ac.uk

Any Amiga users in Leicester want to set up a user group? Please write to S. J. Webb, 3 Gregory Road, Barlestone, Nuneaton, Warks, CV13 0ET or email sjwebb@mailexcite.com

Interested in Internet Relay Chat? Why not visit #Amigazone on Dalnet? We are a friendly bunch and meet at 10pm every day. Check out our website: http://www.tsd-ltd.demon.co.uk

Great Yarmouth user group. Anyone interested in joining this new user group contact John on ☎ 01493 722422.

Is there anybody in the Northamptonshire area interested in starting up a new user group? Please contact me: ☎ 01536 724309 or email n.thomas@ukonline.co.uk

For the latest Amiga news, reviews, articles and interviews, visit the AIO website at http://www.amiga1.demon.co.uk/aio

Any Amiga users in Birmingham wanting to set up a user group? Please ☎ Hitesh 0121 6056452.

Amiga free helpline needs helpers. Also, it needs to help other Amiga users. If you fit into either category, ☎ Terry on 01709 814296 for more info.

New Amiga sound and demo association seeks input, contacts and support to form a user group based around the Amiga music and demo scene. Interested? ☎ Daev 01243 864596 or 0961 985925.

Do you need/can you help with the Amiga at all levels? If so, ☎ Terry 01709 814296.

West Lancs Amiga User Group meets Sundays 1pm-4pm at St. Thomas the Martyr School Hall, Highgate Road, Upholland, Lancs. ☎ Stephen 01695 625063 or Ralph 01695 623865. Email ralph@twiss.u-net.com

Greenford Computer Club. 180 Oldfield Lane South, Greenford, West London. Meets: Thursdays 7-10pm. All welcome. Anything Amiga. ☎ Richard Chapman 0181 9988599 after 7pm weekdays, all day weekends, or email if97rrc@brunel.ac.uk

SEAL, South Essex Amiga Link. Meets twice monthly at Northlands Park Community Centre, Basildon, Essex. Phone or email for dates and directions. Offers help, advice, tutorials and presentations on popular software and hardware. Also scanning, printing, email and a quarterly 36 page A4 magazine. Contact Mick Sutton, 20 Roding Way, Wickford, Essex. ☎ 01268 761429 (6-9pm). Email seal@thunder.u-net.com or visit http://seal.amiga.tm

Shop Watch



The best places around the world to buy Amiga hardware and software.

AUSTRALIA +61

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☎ 03 9436 5555, fax 03 9436 9935, email r.palmer@amigatech.com.au or visit http://www.amigatech.com.au
Stocks all Amiga products, including a new A4000 tower and the latest products from phase 5.

Amiga Innovations, P.O. Box 114 Osborne Park, Western Australia, 6917.
☎/fax 08 9349 0889, mobile 0408 929827. Email dwark@vianet.net.au or visit http://surf.to/amigainnovations
Provides Amiga software and hardware support.

Unitech Electronics, 8b Tummul Place, St. Andrews, Sydney, NSW. ☎ 02 9820 3555.
All hardware and software and also make own cables. Very professional and helpful.

G. Soft Pty Ltd, Shop 4/2 Anderson Walk, Smithfield, South Australia, 5114.
Also at 33 Adelaide Road, Gawler, South Australia, 5118.
☎ 08 8284 1266, email gsoft@cobweb.com.au
New and used hardware and software, repairs, tech support and advice. Family run, helpful, will custom-make tower systems and will give any hardware a custom colour scheme of your choice.

Computa Magic, 75 Spence Street, Keilor Park, Victoria.
☎ 03 9331 5600, fax 03 9331 5422.

Desktop Utilities, Shop 13, Manuka Court, Manuka, Canberra. ACT.
☎ 02 6239 6658.

MVB Computer Supplies, 506 Dorset Road, Croydon, Victoria.
☎ 03 9725 6255.

Synapse Computers, 190 Riding Road, Hawthorne, Queensland.
☎ 07 3899 0980.

AUSTRIA +43

M.A.R. EDV Systeme, Karlsplatz 1, A-1010 Wien.
☎ 1505 7444.
Sells hardware and software and offers an Amiga repair service.

Point Design, Jürgen Schober, Muchargasse 35/1/4, A-8010 Graz.
☎ 0316 684809, fax 0316 684839, email office@pointdesign.com for questions about products and support, or order@pointdesign.com to order a product.

BELGIUM +32

Amiga Service, Rue Du Nord, 93, 6180 Courcelles. ☎ 71 458244.
Stocks PD disks, CD-ROMs, software, hardware and offers services like scanning, hard drive recovery and laser printing.

Generation Amiga, Rue de l' Eglise 22, 1200 Brussels. ☎ 2538 9360.

Amiga City, Avenue du Prince, Heritier, 176, 1200 Brussels.
☎ 2736 6111.

AFI (Applications & Formations Informatiques), Clos Del 'Me 21, 4431 Loncin (Liege).
☎ 4239 0093, fax 4239 0224, email mborremans@arcadis.be
Can provide help on most serious subjects. Stocks the full Amiga range with a good selection of second-hand hardware. Aminet CDs are available, as well as the most commonly used Amiga applications.

Click!, Boomsesteen Weg 468, B-2610, Wilrijk.
☎ 3828 1815.

Digital Precision, Chaussee de Jette, 330, 1090 Brussels.
☎ 2426 0504.

CANADA +1

National Amiga, 111 Waterloo Street, London, Ontario, N6B 2M4. ☎ 519 858 8760. Visit http://www.nationalamiga.com
Stocks all Amiga products, full line, Amiga dealer and service centre.

DENMARK +45

Betafon ApS, Gylden Lovesgade 2, 1369 Kobenhan K. ☎ 3314 1233, email info@betafon.dk or visit http://www.betafon.dk
An Amiga dealer since 1980, sells A1200s, A4000s, PPC cards, RAM, all new software, towers, magazines, etc. Good service with Amiga-specific salesmen who know Amigas.

Kiwi Multimedia, Lerager 60, 3600 Frederiksund.
☎ 4738 0639.
Stocks almost all Amiga products, makes the Millennium Amiga.

FINLAND +358

AIC Systems, ☎ 09 8775 1100, email vmp@dlc.fi

Amigator, ☎ 02 234 5333, email aho@sip.fi

Broadline Oy, ☎ 09 8747 900, email broline@dlc.fi

Broadware Oy, ☎ 09 7001 8580, visit http://iwn.fi/broad.html
Sells a good range of accelerators and other items of hardware.

Gentle Eye Ky, ☎ 03 363 0048, email ge@vip.fi
The staff are very skilled and the shop stocks most new products.

Harcom Oy, ☎ 09 409 373, visit http://personal.eunet.fi/pp/har

Håt Data Huolto Oy, ☎ 09 769 314.
Offers a repair service.

Karelia Computer Ky, ☎ 013 897 088.
Has a good supply of most of the older Amiga hardware and software.

Tsunami Trading, ☎ 02 438 9870, email tsunami@dlc.fi

Video Spotronics Ky. ☎ 09 8735 435.
Offers a repair service.

FRANCE +33

Mygale, Boulevard Raimbaldi 31, 06000, Nice.
☎/fax 4 9313 0635.

Software Paradise, Rue de Lamouly 39, 64600 Anglet. ☎ 5 5957 2088, fax 5 5957 2087, visit http://www.SParadise.com
Official MicroniK distributor.

Ateo Concepts, Le Plessis, 44220 Coueron, Nantes.
☎ 2 4085 3085, fax 2 4038 3321, visit http://www.ateo-concepts.com, email info@ateo-concepts.com
Manufacturer and distributor of Ateo products, such as the Pixel64 card.

Pragma Informatique, Route Departementale 523, 38570 Tencin.
☎ 4 7645 6060, fax 4 7645 6055, visit http://www.pragma-info.com

APS, Rue Louis Maurel 15, 13006, Marseille.
☎ 4 910030 44, fax 4 9100 3043, visit http://www.aps.fr aps@aps.fr
Only sells quality products.

SL Diffusion, Route du General de Gaulle 22, 67300 Schiltigheim.
☎ 3 8862 2094, visit http://195.132.8.152/sld
Very friendly manager.

ADFI Application, Avenue de la Liberation 47, 63000 Clermont, Ferrand.
☎ 4 7334 3434
Distributor of many titles translated into French and have a special agreement with Haage & Partner to sell French versions of their software.

Phoenix-DP, BP 801, 64008 Pau Cedex.
☎/fax 5 5982 9500, visit http://www.phoenix-dp.com, email phoenix@club-internet.fr
Stocks software and hardware for the Amiga, PC and Mac.

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ADX Datentechnik, Haldesdorfer Str. 119, 22179 Hamburg.
☎ 040 642 02656.
Hardware and software reseller.

Softwarevertrieb Kanzmeier, Senator-Balcke-Str. 85, 28279 Bremen.
☎/fax 04 218 31682, email 01461.2277@compuserve.com

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All hardware and software, with many second-hand products at very low prices.

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☎ 812 1868842.
A1200 hardware.

SPAIN +34

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia. ☎/fax (96) 3921567.

SWEDEN +46

Kvarnplan 6, Jakobsberg,
☎ 08 5803 7300, fax 08 5803 7302. Visit http://www.mematex.se or email syscom.amiga@mematex.se
Stocks Infinitives, phase 5 products, plenty of other hardware but very little software.

Vidamus Multimedia, Idrottsvägen 3, 915 31, Robertsfors.
☎ 0934 55533, fax 0934 55485. Email info@vidamus.se or visit http://www.vidamus.se
Stocks a wide range of Amiga hardware, towers and serious software, including the Swedish version of Final Writer.

GGS Data, Korsklevegatan 30, Göteborg.
☎ 031 532526, fax 070 7112492.
Games, some hardware, possible to order hard-to-get things. Small, but surprisingly resourceful.

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☎/Fax: 01872 274037, email dr_flay@hotmail.com or mike@globallounge.co.uk or visit http://www.globallounge.co.uk
Only stocks PD at the moment, but can order anything with good prices on phase 5 hardware. Depending on the demand, they will start to keep more stuff in stock. They are an Internet shop and make websites, do design work, advertising and promo material and can also build custom Amiga/Siamese setups.

Gamestation, Unit 29, The Market Vaults, St. Helens Square, Scarborough, North Yorkshire.
Stocks hardware, games and utilities. Helpful staff.

HardPlay Software, 2 Broad Street, Newquay, Cornwall, TR7 2BU. ☎/fax 01637 850909.
Console and games shop.

Level 7, 113 Victoria Road West, Cleveleys.
☎ 01253 859004.

SES Computers, 88-90 London Road, Southend-On-Sea. ☎ 01702 335443.
Loads of software, peripherals and second hand hardware. Limited stocks of new hardware, helpful staff.

Cavendish Computers, 144 Charles Street, Leicester. ☎ 0116 2510066.
Hardware (old), games and utilities.

Classic, 11 Deansgate, Radcliffe, Manchester,
☎ 0161 7231638.
PD, commercial games, CD^{32}, CD-ROMs, hard drives, CD-ROM drives, A1200s, floppy drives, disks, modems. Free fitting service on hard drives.

Mays, 57 Church Gate, Leicester city centre.
☎ 0116 2516789.
Hardware, games and utilities.

Computer Solutions, Unit 2, Mill Lane Mews, Ashby-de-la-Zouch, Leicestershire, LE65 1HP.
☎ 01530 412983.
New and used software, hardware, stocks full range. Helpful staff.

Planet Games, 3 Royal Oak Buildings, Waterloo Road, Blackpool. ☎ 01253 348738.

Allsorts, 51 Park Road, Wosbrough Bridge, Barnsley. ☎ 0589 272940.
Games, PD, disk drives, monitors (all used).

Game, Sheffield Town Centre. ☎ 0114 2729300.
Sells various Amiga games, utility disks and other items of software. It's also possible for customers to reserve games in advance.

Electronics Boutique, Gallowtree Gate, Leicester city centre.
Stocks most games, although it does tend to be a bit slow on new games.

Chips, 8 Watchbell Lane, Newport, Isle of Wight.
☎ 01983 821983.
Lots of classic games and older Amiga hardware.

Tech-Exchange, 3 Forest Road East, Nottingham, NG1 4HJ.
☎ 0115 9100077.
All Amiga products and a helpful and knowledgeable staff.

Vortex Services, 13-15 St. Michael's Square, Ashton Under Lyne, Lancs, OL6 6LF.

Electronics Boutique, 30 The Mall, Golden Square, Warrington, Cheshire.
☎ 01925 240731.
A good selection of Amiga software and peripherals.

Electronics Boutique, Unit 120, 3 Russell Way, Gateshead Metrocentre, Gateshead, Tyne & Wear.
☎ 0191 4602637.
A small selection of about 40 different games and utilities, mainly older but some new. Also some peripherals.

Electronics Boutique, 81 High Street, Meadowhall Centre, Sheffield.
☎ 0114 2569060.
Games, utilities, mice, educational software and can order software. Helpful staff.

Electronics Boutique, Unit 19, St. John's Centre, Perth, PH1 5UX, Scotland.
☎ 01738 637807.
Software and peripherals and will order any Amiga games you require.

Swops, Corner of Bold Street, Fleetwood.
☎ 01253 776977.

Computer Cavern (Capri CD Distribution), 9 Dean Street, Marlow, Bucks, SL7 3AA.

USA +001

A.D.A. Computers, 11770 Stucki Road, Elberta, AL 36530. ☎ 334 986 8428, fax 334 986 6308, email adfarm@gulftel.com

TLAS, PO Box 30499, Midland, Texas, 79712.
☎ 915 563 79712.
Games software, some hardware, 100% Amiga. Very high quality software.

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Send entries to: Shopwatch • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.

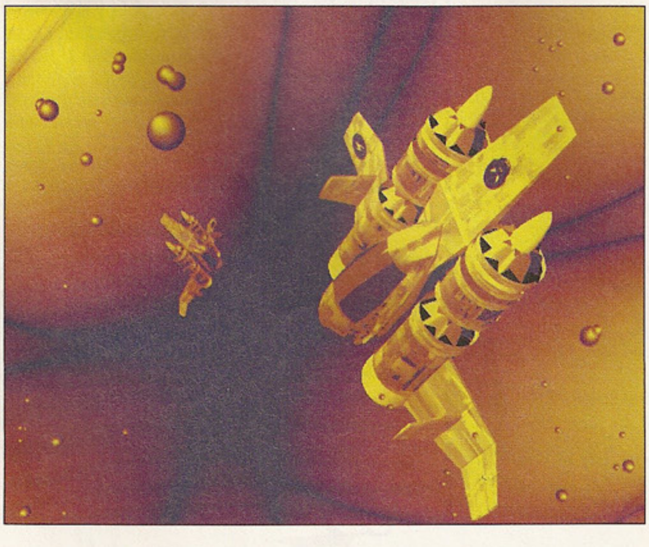
The Gallery

ON THIS MONTH'S CD

AFCD38:-ReaderStuff-/-Gallery-

Ben Vost takes a look at the best Amiga artwork around in this month's Gallery.







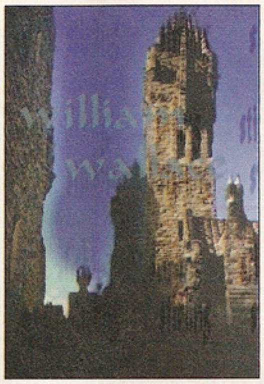


Egypt, Evade, NanoShips, Transit, by Rob Turner
Although the modelling on Rob's ships is limited and simple, we really liked the colours he used and the composition of the images. The idea of Lyapunova space as hyperspace, or nano space, is really good too.



Wash Room by Stephen Thornber (above)
Stephen has provided us with this beautifully-lit render of a bathroom. We particularly like the bath screen. It's amazing what you can do in *Imagine* if you put your mind to it, isn't it?





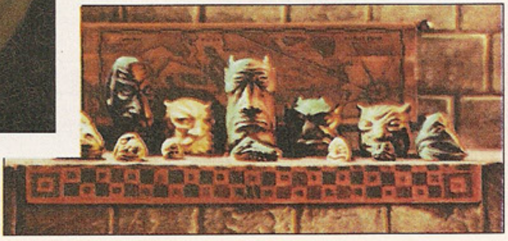
Wallace (above) by Andy Watkinson
Andy went on holiday last year and brought us back these nice pics taken with a real camera (as opposed to a digicam) and scanned them into his machine. We'd rather see some original work from you though, Andy.

Spiderweb & Angel In Her Eye by Ogy
We liked the spiderweb for its single colour palette and form, and the angel is a statue in Bath that we're all supposed to be familiar with at *AF*. Sorry Ogy, which one is it? Is it the one just outside the abbey?





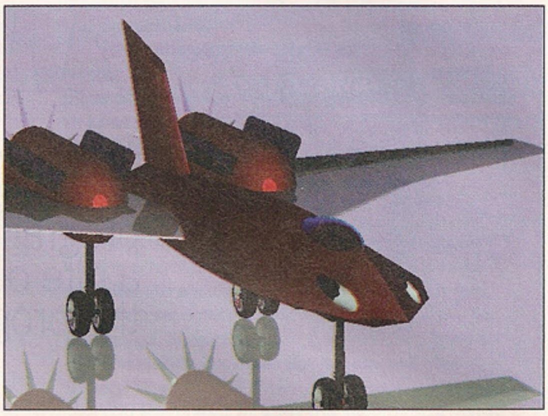
Face by Victor Bell
An old project by Victor, he decided to put this in the Gallery solely on the basis that he had room left on the disk he sent us!



Stone heads by Kevin Cullen
Kevin graces us with another scanned and retouched image that he's drawn.

YASS, YOU'RE VERY BRIGHT

One of the things I've noticed when doing The Gallery is that a lot of you have your monitors set too bright. This results in images that are very dark and have to be artificially brightened here, so turn down the brightness!



Airoplane by Baard Andrè Åolfsen (above)
Baard also supplied us with a picture of a gun, but it was a bit simple so we've gone for this SR-71-style plane instead, although the composition on this needs a bit of work too.



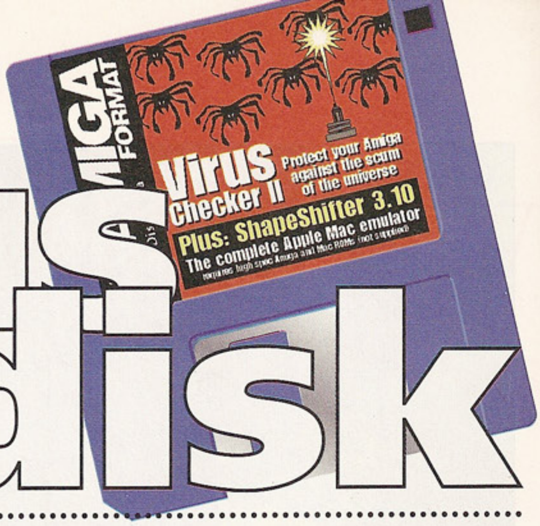
In the Middle of Nowhere by Juha-Pekka Jokela
Another image from one of our Scandinavian readers, this is a nice representation of a truck on a night-time road. I'd just say turn your monitor brightness down a bit, Juha-Pekka – the image is so dark you can hardly see anything in it!



Grotesque Glory by Ben Wright (above)
Hand-drawn in *DPaint IV AGA*, this image gives a suitable sense of foreboding. Keep sending in the work Ben, we like it.

CONTRIBUTIONS

If you'd like to enter your work for The Gallery in *Amiga Format*, read the Reader Submission file on the CD or simply send your work to this address: The Gallery, Amiga Format, 30 Monmouth Street, Bath, BA1 2BW. Please make sure you include the reader warrant from the CD pages in this mag.



Serious AMIGA FORMAT disk



Keeping your Amiga in top nick isn't just about keeping programs up to date – it's all for nothing if a virus takes a bite out of your computer. **Dave Taylor** introduces the program that protects you.

Virus Checker II

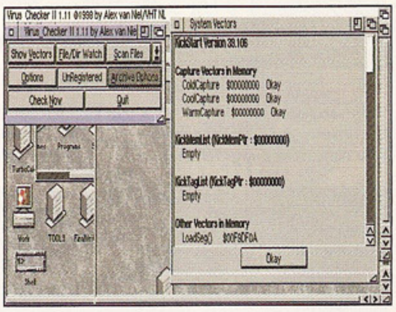
Viruses are nasty things written by sad, lonely people with no friends. They are essentially small, destructive programs that hide themselves inside other, genuine programs. Then when you execute that program, you unwittingly execute the virus. The virus then duplicates itself so it spreads itself across the other programs on your Amiga. After a given length of time, the virus activates itself and does whatever it was programmed to do. This can be anything from printing up a message to wiping your hard drive.

While the programming of viruses on the Amiga has slowed down dramatically, the blighters do still exist and there are new ones appearing. To make sure you keep your Amiga free from attack you need an up-to-date checker that can both scan existing files and monitor new ones.

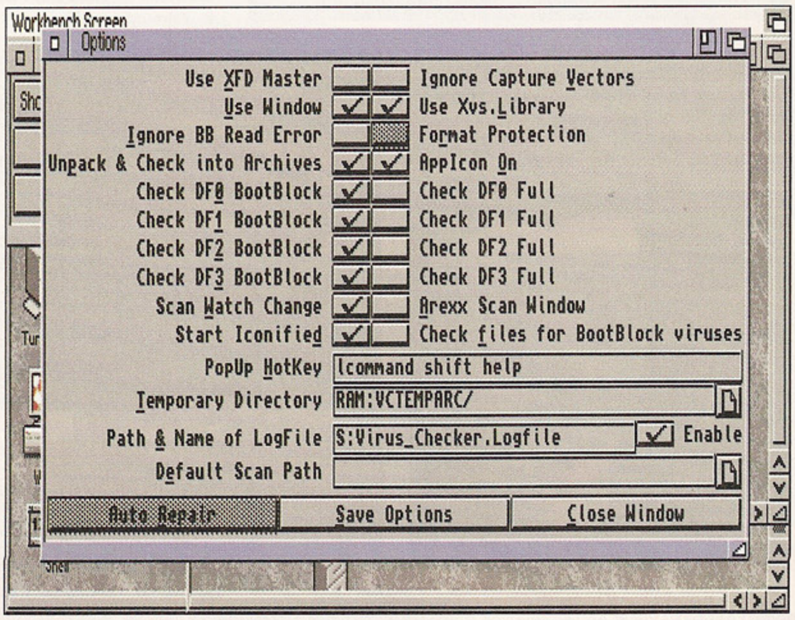
> "To make sure you keep your Amiga free from attack you need an up-to-date checker that can scan existing files..."

Virus Checker II is one such program. When you install it you should set it to run every time you boot. The interface can be opened minimised to a title bar so you don't have to see the full GUI all the time. To open the GUI, right click on the program's titlebar.

The main program has several buttons and is easy to use. The first button is Show Vectors. This checks memory to ensure that there are no viruses resident, waiting to latch onto programs as they are launched in order to propagate themselves, so you should check this out first. The next button is



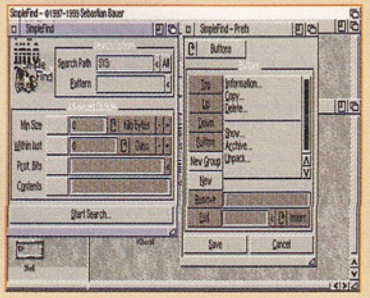
The first order of business is to check the memory of your Amiga to ensure there are no viruses resident.



With the advanced configuration options, you can choose which features are enabled to make *Virus Checker II* suit your system.

SIMPLEFIND

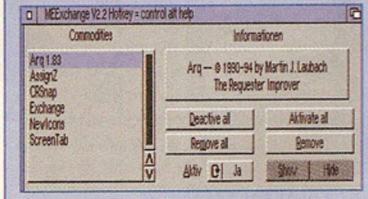
This gem of a program was something of a discovery. "Another Find program," we thought. "Tsk." However, when you start to use it you realise that it's an incredibly powerful tool. When you've installed it you'll find an easy interface that allows you to search using various criteria. You can even search inside files for the pattern. In order to use the program properly you need to set up some preferences and patterns first of all, so run the preferences program first – roll through the different preferences sections using the button at the top. If you don't then some of the drop down menus, which offer a lot of features, will be empty. Although the interface is easy, read the documentation and experiment with the program. It's worth the effort but if you only take a cursory look you won't be able to use the program to its fullest.



Highly configurable, *SimplyFind* is far from simple. It's advanced and extremely useful. You can even search file contents.

MEEXCHANGE

The version of *Exchange*, the commodity that controls commodities, that comes with Workbench is a little old. This new version adds a facelift and several new features.



Get better control of your commodities with *MeExchange*. Like other replacements it improves on the default *Exchange* supplied with Workbench.

the File/Dir Watch button. This one opens up a new box where you can add drawers or files that the program will track. Whenever a file or directory that's watched has a change made to it, *Virus Checker* will ensure that the change wasn't done by a virus.

After checking the vectors, the next thing to do is use the third button along, Scan Files. This opens a normal requestor. Choose a folder or a drive and the program will immediately scan it for viruses. The first time you run the program you should use this option to check every drive on your system so you ensure you're clean. This operation will take some time if you have a large hard drive, but if you don't do it you won't be starting from a position of total security.

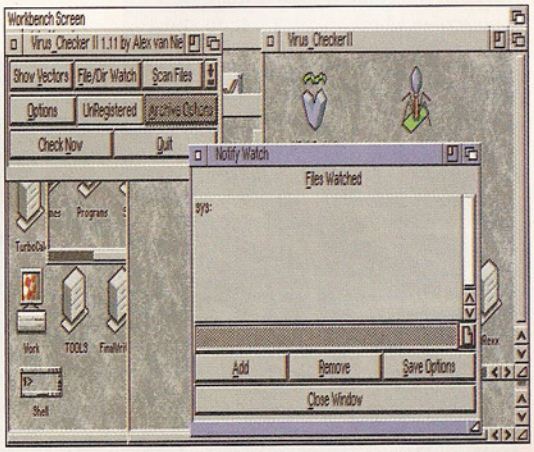
OPTIONS

The Options button allows you to set some preferences for the program. For example, you can set up log files and you can decide what should happen with floppy disks. As your primary aim after checking that your system is clean is to keep it that way, you need to make sure that new programs brought to your system are clean.

Floppy disks are obviously a prime distribution method. With *Virus Checker* you can choose to scan the bootblock of floppy disks as they're inserted to ensure that they're not infected, but you can also choose to scan the entire disk for viruses.

The reason this is an option is because it is the safest way, although checking all the files on a floppy, which is a slow medium, will take some time. This will get frustrating after a while so you have to make your own mind up about how safe your disks are. The best thing may be to not have it set to check every file, but to manually check every new disk you get, prior to using it, with the Scan Files command.

Finally there's a Check Now button. This is similar to the Scan Files button but it allows you to set up a list of files and folders that can be saved. You can then click on this to do a quick scan of the same drawers time and time again. Note that this is a Shareware program and the full version costs $20. The registration details can be found in the documentation.



You define the directories and, if you want, individual files that *Virus Checker II* continually monitors to ensure they're not attacked.

SHAPESHIFTER 3.10

When is your Amiga not your Amiga? When it's an Apple Mac. No, we're not going mad. *ShapeShifter* is, of course, the incredible Mac emulator. It allows you to run a fully working Mac platform on your Amiga and the performance is quite amazing. This is because of the use of the same processor in each of the two platforms so that no processor emulation has to take place, as it does when you run a PC emulator.

***ShapeShifter* is now Freeware so this is the complete program. To use it you need to own a set of Macintosh ROMs and the System software for the Mac. Neither of these is included in the package for legal reasons. You need to use the ripping utility included to remove a software image of the Mac ROMs and copy it to the program directory on your Amiga. Both 512K and 1Mb ROMs are supported. For details on copying the ROMs, see the documentation.**

Note that you can't use the Amiga Mac at the same time as the real Mac. You can only use the ROMs on one machine or the other.

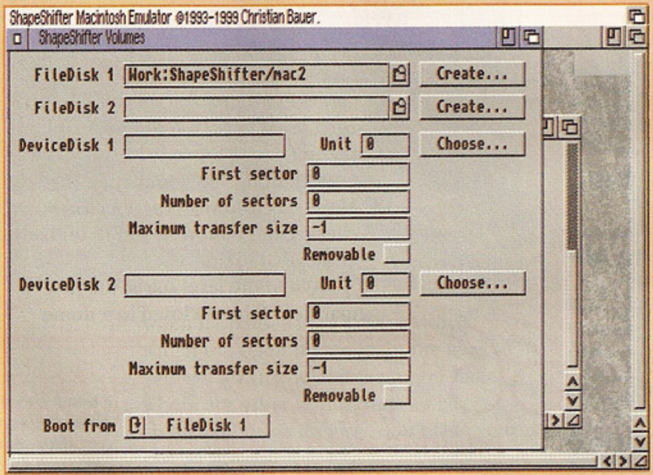
Running the program is easy. Once installed you need to run a CLI command included called *PrepareEmul*. This may require a switch or parameter of "A1200" to work properly and it may re-boot your machine. If it doesn't, don't worry. You don't need to run the program again until you've done a cold reset. If you want to run *ShapeShifter* frequently, the *PrepareEmul* program should be called from the start of your Startup-sequence. All *PrepareEmul* does is prepare the memory for use with the "Mac". It doesn't affect the performance of the Amiga as an Amiga.

When the program itself is started you have a simple interface with various areas for controlling parts of the system. Here you can choose a volume to boot from or you can create a disk file which is a virtual Mac disk created as a single large file on your hard drive. It's much slower than a real partition but it's quicker to start using.

You then need to decide on how much memory you're going to allocate to the Mac. If you don't have much RAM then don't plan on multi-tasking and allocate all the free RAM. If you've got lots, allocate a reasonable amount but keep some for the Amiga. *ShapeShifter* is fully multi-tasking so you can switch between the Amiga and Mac screens at will.

You then need to boot the system and install the operating system so you'll need a bootable Mac disk from your original Mac setup. For this reason you need a HD floppy drive on your Amiga. When the system is set up, the "Mac" will boot and work like a normal Mac – you can install and run programs and perform any other normal functions.

Please note that while *ShapeShifter* is a brilliant product, it's quite complicated and this can't be a full guide to using it, just an overview. It has quite high system requirements and you should read the documentation fully before starting to use it.

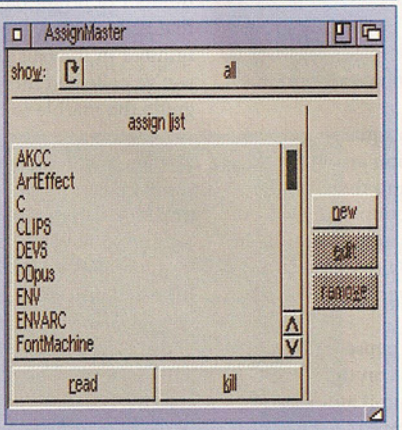


ShapeShifter 3.10 is the fantastic Mac emulator which turns your Amiga into a whole new animal. The good news is, it's now free.

ASSIGN MASTER

This is another useful utility that allows you to keep track and modify the assigns that run on your system.

So many programs add assigns into your startup-sequence to use virtual volumes that it's easy to lose track of what's being used. *Assign Master* makes it much easier to take control.



Take control of your system with *AssignMaster*. You can see, add and remove assigns from the system at will.

Games disk





AMIGA FORMAT

Get your thinking cap on for this new commercial game demo where reactions are as essential as reasoning. Play ball, says **Dave Taylor**.

Marblelous 2



Five *Marblelous* levels for you to try.

Remember all those years ago when marbles ruled the playground? Where the glass balls were a precious commodity to be won from friends until your collection had grown to such an impressive stature that you'd fully gained the respect of your peers? Until the envious bully stole them all, of course.

Well, *Marblelous* has nothing to do with them. Instead, you control a marble and must guide it around various levels in order to get it from the start point to the exit. It sounds easy but you'll soon find that the game has a lot of depth. It also has a huge number of features and with multiple balls requiring your attention, it takes a lot of juggling.

There are a hundred levels in the full game, but the five playable ones here should give you a good idea of the game and will take longer to complete than you might first expect. In fact, expect to unleash a few profanities at the screen by level three.

When the game is started you have a menu screen where you can roll up and down the options using the mouse. Click on the Start text to begin the game. Before each level you'll see a brief screen which reminds you about the full game, but it also gives you important tips on completing the level. Make sure you read these before clicking the button or you're unlikely to know what to do.

When the level starts, the first marble will be enclosed in a dome which will release it a few seconds later. You can use this time to take stock of the level and quickly formulate a plan. The reason for all the planning is that you don't control the balls directly. Instead, the ball simply rolls forward and you have to place arrows in its path to direct its route. To do this you move the mouse around the screen and you'll see the square target move around the screen's grid.

> "Whenever you haven't been fast enough and the ball collides with a wall or obstacle, it will explode..."

When you're on a square where you want to place a direction arrow, click and hold the mouse and then roll the mouse off in the direction you need the arrow and release. An arrow pointing in that direction will be laid in the path. When the ball rolls over the arrow it'll change direction.

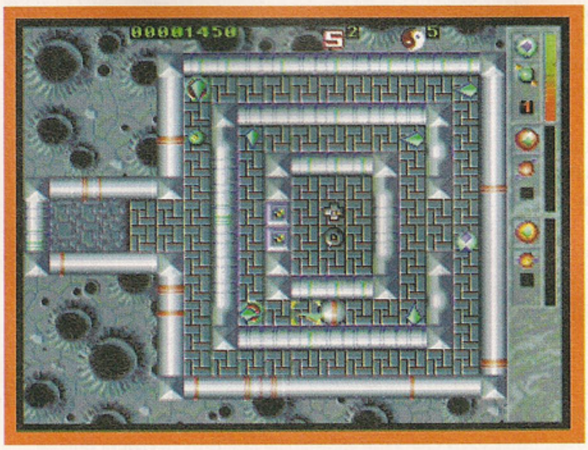
You can also lay a pause sign down. To do this, simply click on the square where you want to plant it and release. A No Entry sign will appear. When the ball rolls over the No Entry sign it'll pause temporarily. To cancel the pause, right click on that spot. It's important to note that this method can only gain you a few seconds. The ball that you control has a colour around it and on the right of the screen you'll see a status bar for that ball. On this is a coloured gradient. This is a timer which shows how much pause time you have left for that ball. Whenever a ball is paused the gradient bar for that ball ticks down and it goes quickly. Use the pause sparingly and cancel it as soon as you can. If the ball is paused and its time runs out then it will continue to roll.

Whenever you haven't been fast enough and the ball collides with a wall or obstacle, it will explode and you lose.

In order to complete a level you need to collect a number of power balls to grant you access to the exit. The number of power balls required to allow that ball to exit will be shown by a number in the ball's status bar. When you've collected the power balls you can guide the marble to the exit and it will complete the level.

The first level is a simple one and should prove no problem, but level two introduces the multi-ball feature. This is where you have to guide two balls simultaneously. The second ball isn't released until you roll the first ball over its trigger so you have some time to plan ahead. The best way is to not release the ball too early – the trigger is the coloured circle in the top right corner.

You're unlikely to finish the level the first time you play it as you won't know which direction the second ball, released from the dome in the middle



Level 2 – keeping two marbles on the go takes some juggling.

SIX-TRIS

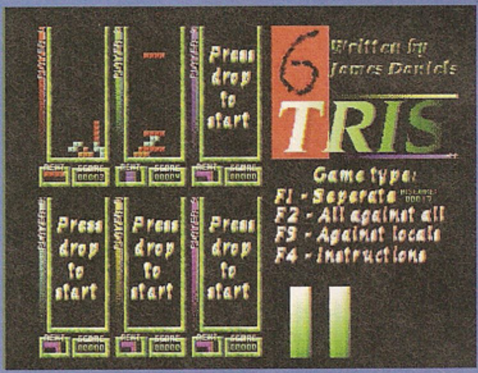
Tetris wasn't invented; it was discovered. So the title screen to this game tells you, but its cryptic message is just a little too subliminal for me. What I do know is that a six-player game on a single Amiga is something of a treat. With *Six-Tris* you can play simultaneous games against each other. There are various game modes and the boards for all players are shown on the screen in two rows of three.

The instructions in the game show you the controls, but the first player uses the joystick. Rotating the blocks is done through left and right and down drops the block. As always, the aim is to fit the blocks together to complete a horizontal line – it's like a living jigsaw.

The difference here is that as you complete lines you make it harder for the other players. If you play the All Against All game, when you complete two lines or more in one go, the lines (minus one line) are passed on to other players. These become immovable lines at the bottom of their playing area, effective reducing their playing area and making it harder to keep going. When everyone else gets the shapes piled up to the top and can't complete lines, the last one surviving wins.

Another game mode, Against Local, also allows lines to be passed on, but you need to read the instructions to see the differences in gameplay. There are several unique features in the game, explained in the instructions which can be read in the game itself by pressing F4. The game is completely free, so have fun.





Simultaneous six-player action. Providing you can all fit round the keyboard and see the monitor, there really can't be a more fun way of experiencing *Tetris*.

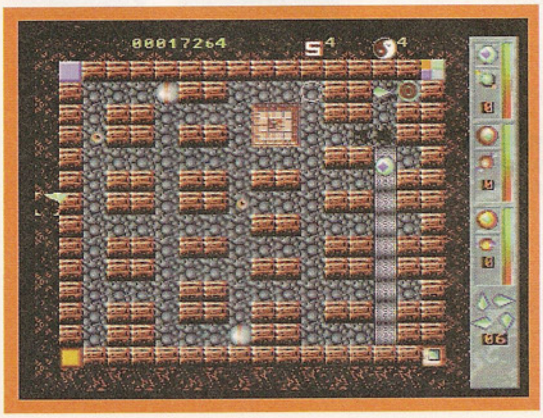
of the inner walls, will take until it's released. When you've seen this you can play the level again and plan the route for the first ball, lay it in and then leave it rolling while you put in the route for the second ball. One handy tip is that you can force a ball back the way it came by simply placing an arrow in its path that points back in the direction it came from – you don't need to divert it using a series of arrows.

The next level is remarkably tough. You need to collect a shield to allow you to roll through the diamonds that are in your way and you need to navigate a power gate. The power gates can destroy you if you go through them when switched on, but they turn on and off so pause the ball and roll it through when it opens. There's also a switch which will open the doors in the level so you can go and collect the power balls. There are other bonus items to be collected but, as they say, don't take your eye off the ball.

By levels 4 and 5 things get really tough, with enemy marbles to dispense with.



As you progress through the levels you'll come across different power ups and different problems. You'll also find that some levels have extra challenges like time limits or a restriction on the number of arrows you have at your disposal.

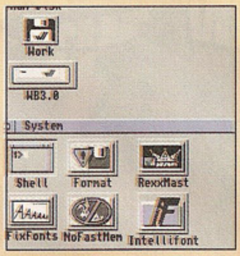


The game is really addictive but it can be frustrating when you don't have time to lay the arrows as the marble catches up with you. It's great fun though, and the five levels give you a real taste of what's on offer. Details on the full game and the features it offers can be found in the documentation.

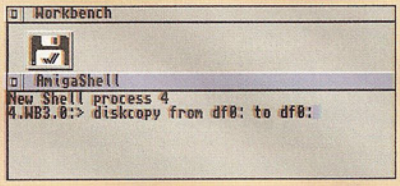
The other program you'll find in the drawer is the editor. This is included for you to take a look at and it comes as part of the full game. However, you can't use the version in the demo to edit or create new levels. AF

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

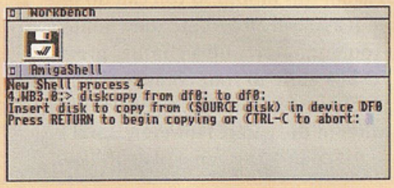


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

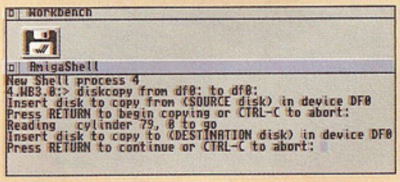


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

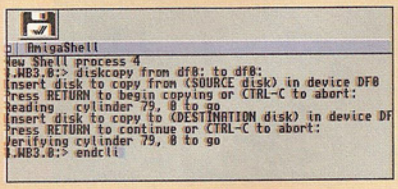
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



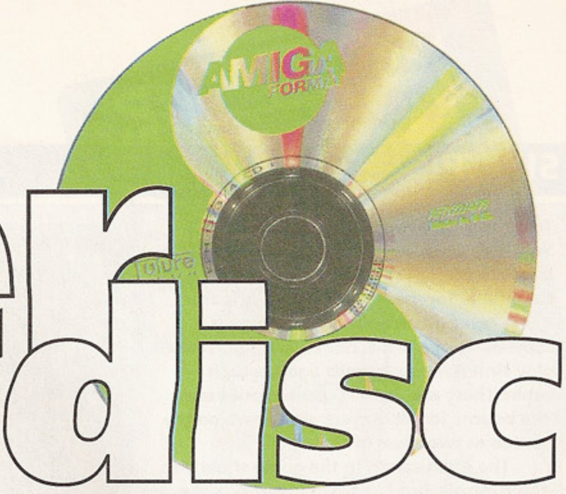
5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.

DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

***Amiga Format* (insert name of disk)**
TIB PLC • TIB House
11 Edward Street
Bradford • BD4 7BH

If there is a manufacturing error then the stamps will be returned with a replacement disk.



Cover disc



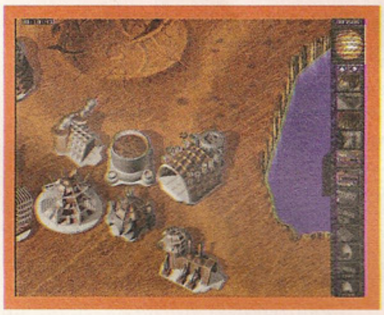
AMIGA FORMAT

Welcome to the 38th *Amiga Format* CD-ROM. The festivities can begin now you're here. **Ben Vost** is your host.

NAPALM DEMO

-ScreenPlay-/-Commercial-/NapalmDemo_v1.1

Have you read our exclusive review yet? Are you excited? Do you wanna check that *Napalm* is actually going to run on your machine? Well, the demo is on the CD again this month so you can do just that. It's fully-featured but time limited (if you don't hurry up a chuffin' great UFO lays waste to your command centre), so you won't get to play huge swathes of the game. However, you'll be able to see how the game plays in Low



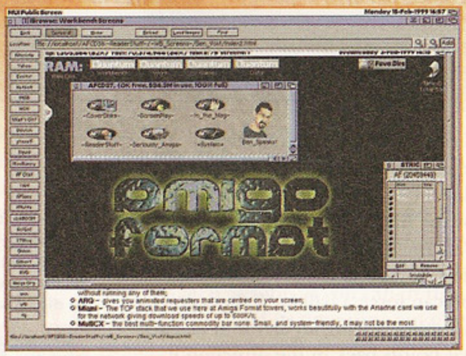
FIRSTLY FIRST

As recorded in our AFCD_Changes file on the disc, this month we've got rid of loads of stuff from the CD. The biggest change will probably only be noticed by those of you with some kind of file manager and an interest in that kind of thing, but we've lost a bunch of directories, things that were necessary for booting the CD. However, as you may have discovered if you tried to boot *AFCD37*, we can no longer do that.

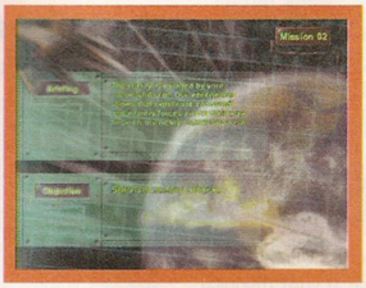
The deletion of these directories doesn't mean a huge change in the amount of space devoted to system files since we didn't really use that much for those directories anyway. The remainder, C, S, Fonts and Libs, are either still necessary for *AFCDPrefs* or we've left them on there as a resource. The files in these dirs might not be the most up-to-date at the moment but that's the next job. We'll have the very latest versions of libraries and so on for you to use as you will.

The second thing is that the Reader Workbench section seems to be pretty popular. We're getting an increasing number of submissions for this part of our disc, but we're finding that you aren't really giving us enough details of which programs you're using to make your Workbench look or perform the way it does. I've put an example file on the CD this month that you're more than welcome to use as a template for your own Workbench shot. Putting URLs and details of where you can find the various hacks and patches which you've used would be particularly useful too.

Also, if you're going to email them to me, please make sure that you're following the Submission Advice document on the CD to the letter. If you don't see your submission within two issues of sending it in then you've probably fallen foul of these rules somehow, and since I get somewhere in the region of 400 emails a day (and I have a mag to run now as well), I will be harsh.









We love the look of *Napalm* in the morning, so get to work on the demo!



READER REQUESTS

-In_the_Mag-/Reader_Requests

We've got something especially for Timm Rutland in this drawer on the CD. You may remember that Timm has dedicated plenty of time to making an *AF* browser, but he only had cover images up to issue 99. This CD has all the covers from the very first issue, all the way up to issue 121. It only goes up to 121 instead of 122 because at the time of writing this guide to our CD the CD is done, but the cover isn't. We'll keep you posted and keep putting covers onto the CD since they seem quite popular.

Also, you may notice the sudden jump in quality between issues 99 and 100. This is because all those issues were scanned into pictures, whereas the ones from 100 onwards never left the digital domain and were instead just converted from *Quark Xpress* documents into EPS files and then into IFF ILBM pictures for your viewing pleasure.



Every cover of *Amiga Format* ever, handily stored on our CD.

Your Stuff!

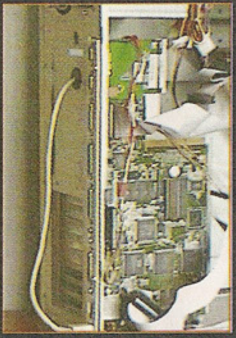
Reader of the Month £50 Winner!

We didn't get that much stuff from you this month. Although we have 12 drawers in the ReaderStuff directory, the total number of bytes this encompasses (and that includes the WBScreens drawer and Gallery) is only about 35Mb. What happened to those days when we got 200Mb? C'mon!

Anyway, the outright and easy winner for this CD is Norman Etherington who painstakingly photographed his project of towering his Amiga into a rather yellowing Goldstar PC case bought from a car boot sale for the princely sum of £4. We received this some time ago and it's only down to my disorganisation that the project didn't get onto the CD sooner. It's proof that if you're mechanically and electrically apt, you can save yourself a bob or two by creating your own tower, rather than buying one from one of the Amiga dealers.

Other things of note included Angus Manwaring's AGDB web page, which now has reviews of more than 400 Amiga games of yesteryear, together with some "celebrity" reviews. Stuart Anslow gave us a superb insight into martial arts in his extensive AmigaGuide file, although it might have been nicer to have used *AFCDView* as your viewer rather than *Viewtek* since some people might not want to use *Viewtek* because it might not work nicely on their machines. There's the omnipresent Bernard Cain with another updated version of his *Business Card Maker* program, which improves every time he sends it to us. Mario DelBusso has come up with a way to get around the PC's inferior .MOD naming methods, Ian Field has given us an *Amos* comic database and Steven Ross has given us a shopping list manager.





The undisputed winner this month was this guide to towering up an Amiga (left).



and High Res, provided your machine has the necessary horsepower.

MODEM UPGRADES

-Seriously_Amiga-/Comms/Other/56SoloUpgrade
-Seriously_Amiga-/Comms/Other/V90upgrade

If you have a Dynalink 56K or Pace Solo modem, you're in luck. We have updaters for both to flash the ROMs on these modems to give you full-on v90 access to the Internet, subject to your ISP supporting it, of course. While flashing any ROM is a hairy business, as long as you aren't doing anything else on your machine while it's working it should be fairly safe.

The Dynalink upgrade requires a comms package (*Term*, or the author recommends *NComm*), but the Solo upgrade is a standalone program that'll

Continued overleaf ➡

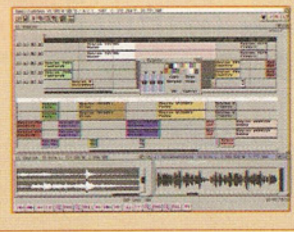
AMIGA AUDIO DEMOS

Simon Goodwin deconstructs his demos of the Rombler and 3D Sound Box, which can be found on *AFCD38*.

3D SOUND DEMO

The 3D Sound box demo is the shortest and simplest. Sound from Paula's analogue outputs has been digitised with and without Toshiba's 3D processing. Listen and judge the results for yourself. The PDF file on the data part of the CD goes into more detail about the signal-processing involved.

The sounds come from Skorpik's Proba Mikrofonu *Protracker* module. The only tweak we've performed in *Samplitude* is an 8dB linear boost on the untreated signal to align the levels for recordings made with and without 3D processing. My commentary has been digitally mixed in later.



Samplitude Opus pulls the individual sample files together into a multi-track virtual project.

ROMBLER DEMO

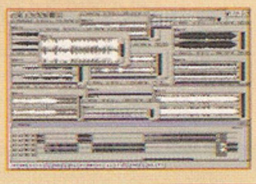
There are a dozen sound snippets in a wide range of instrumental styles on the Rombler demo track, from rave to bebop. These were recorded in stereo with Prelude, then mixed and edited together as a 'virtual multi-track project' with *Samplitude Opus R9*. This directly generated the CDDA digital audio file, ready for us to master onto your CD in around one third of real-time. This was done via my 1Gb SCSI 2 FAST drive and Zorro 3 A4091 controller.

All the Rombler demo sounds were generated, processed and recorded digitally on one Amiga using *PianoMeter* or *GMPlay* to replay the MIDI events from Yamaha's demo CD via *CAMD*, and recording directly into Prelude's analogue to digital converters. The only external equipment used was a microphone and matching pre-amplifier, unless you class me as an 'accessory' on account of my voice-over. Digital compression and gating were performed on the 68060, faster than real-time, using the powerful DSP options of *Samplitude Opus*.

This is a severe real-time test and the tracks deliberately weren't tweaked; neither was a special Amiga configuration built to record them. This is what you get if you use a single Amiga for simultaneous MIDI sequencing and hard disk recording. All my normal commodities and utilities remained running, about 80 tasks in all, including applications like *Directory Opus*, *Final Copy*, *Workbench* and Shell windows.

The microphone technique isn't perfect and there's a bit of background noise on the commentary – if you listen very carefully you may hear the A4000 fan in the background and the distant rumble of traffic en route to the M5. We've used *Samplitude*'s compression and noise gating as you'd struggle to find any microphone amp approaching 90dB signal to noise ratio, matching *Prelude*'s inputs, in the real world.

Subtle timing discrepancies might be ironed out by running the MIDI, SCSI and mixing on separate systems, or by tweaking the disk and *CAMD* buffer sizes. This is meant to be a realistic example, not a contrived 'benchmark', and it sounds good to us. If you're in any doubt, let your ears decide.



The Rombler demo combines twelve distinct stereo sample sequences and half a dozen short voice-overs.

At your fingertips

IOBLIX UPGRADES

-Seriously_Amiga-/Hardware/IOBlix12Usr376
-Seriously_Amiga-/Hardware/IOBlixZ2Usr376

So you went out and bought a brand new IOblix board because of Andrew or Simon's reviews in the last issue, eh? You might be wanting the new drivers then, and this is where you'll find them. Basically updates for the serial, parallel and parallel Zip drivers, these should make your IOblix chunk along that little bit faster.

MP3 PLAYER

-Seriously_Amiga-/Sound/amplifier

If you're into MP3 files it's definitely worth your while checking out *Amplifier* on this month's CD. Somewhat more system-friendly than *AmigaAMP*, it also supports skins, and I have third party reports that say they're better at rendering down to however many colours your display uses than *AmigaAMP* can do so.

⬅ do all the dirty work for you and give you a nice sparkly v90 modem, instead of your old k56flex one.

HERETIC AND HEXEN

-ScreenPlay-/Shareware/Heretic&Hexen_Ports

Don't expect great things from these as they're the first ports of *Heretic* and *Hexen* and they won't run directly from the CD – you'll need to copy the port of your choice and the appropriate WAD file onto you hard drive (the WAD file goes into the port's drawer). Then you should be able to play these two related games to your heart's content, or at least until you finish the demo levels and wait for Alive mediasoft to send you out the full version (only £15.99 including post and packing).

If you're a *Quake* fan, *Heretic* and *Hexen* probably won't offer you anything much to get your teeth into, and you'll feel the blockiness of the sprite-based engine starting to annoy you. At least *Heretic* and *Hexen* both allow you to look up and down though, unlike *Doom*, whose engine they're based on.

However, unlike *Quake*, both games offer a bit more in the way of storyline and interaction. Best of all for some people, you get to play a pointy-eared elf-type instead of a gritty soldier. The weapons are also a bit more extensive. They incorporate the usual ranged weapons but you also get spells and all manner of other fairytale gubbins. Still, it makes a nice change to the gloominess of *Quake* and the levels really are quite colourful.







The only problem with them both is that they don't allow you to reconfigure the keys you use for stuff, so if you're left-handed you may have a bit of a problem with the keyboard layout. Then again, *Doom* had the same problem and no-one complained about that.

Be warned that some of the ports won't work with the Shareware WAD file right now. Some should and you might have to experiment with them, but look out for next month's CD and we'll have all the latest ports on that.

Doom and *Quake* fans should definitely try out these versions of *Heretic* and *Hexen*.

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This is open between the hours of 2pm and 5pm every Tuesday.

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(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD40 – Amiga Format* issue 124, June.

Please tell us:

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Your address: ....

....

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AF 122 – APRIL 1999

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If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

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120Mb IDE Conner	£58.99
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4.3Gb	£237.35
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Includes set-up software, cables and full instructions. For A600/A1200. See above for Hard Drive prices
£POA

Cables

23 Pin To 15 Pin Multisync Adapter	£7
9 Pin Mouse/Joystick Extension	£5
Mouse/Joystick Switcher	£14
Surge Protector 4 Plug Adap.	£15
Parallel Printer Cable 1.8M	£5
Parallel Printer Cable 4.5M	£12
Parallel Printer Cable 10M	£20
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Centronics Male To Female 1M	£15
Centronics Male To Male 1M	£15
SCSI 3 Device Internal Cable	£14
SCSI 7 Device Internal Cable	£17
Micro D Male To Micro D Male	£33
Micro D Male To Centronics Male	£33
25D To Centronics Female	£18
Internal 50 Way SCSI To External	£13
Amiga A600/A1200 2.5" IDE Cable	£10
Dual 3.5" IDE Cable	£10
A600/A1200 2.5" To 3.5" Cable Set	£20

Memory



256k 30 Pin (256*8) 100ns+ SIMM	£2
1Mb 30 Pin (1*9) 70ns SIMM	£7
1Mb 30 Pin 3 Chip 70ns SIMM	£10
1Mb 72 Pin (256*32) 80ns S/Sided	£5
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8Mb 72 Pin (2*32) 70ns S/Sided	£13
8Mb 72 Pin (2*32) 70ns D/Sided	£13
8Mb 72 Pin (2*32) 70ns 8Chip	£13
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Wizard A500 1/2 Ram Upgrade	£17
Wizard A500+ 1mb Ram Upgrade	£23
Zydec A500 1.5Mb Ram Upgrade	£45
Amitek A500512k Board	£17
2 Meg Agnus 8375-16	£15

Amiga's

New Computers

A1200 68020/14MHz 02Mb	£169.99

Part Exchange

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A1200 127Mb HD 6Mb RAM	£200.00

Teletext

Teletext Decoder For Amiga	£19.99
Pro Tel Teletext Receiver (Ami	£19.99

Miscellaneous

Bound Manual For X-CAD	
Available Free On Our Website	£9.99
Amiga A600 Dust Cover	£1.00
Quality Mouse Mat	£2.50
80 Capacity Banx Disk Box	£6.99

Storage



iomega Zip Drive
Only £99.88

- Includes One 100mb Cartridge
- Fast SCSI Interface Version
- Includes Cable & Amiga Zip Tools

Zip Drive 100mb Media (each)	£9.98
Squirrel to Zip Adapter	POA

A SCSI Interface may be required at an extra cost. See Squirrel section on this page.

Eyetech A1200 IDE CDROM Kit	£74.99
Prima Amiga 1.7mb Ext. Drive	£49.99

Floppy Disks

Disks 3.5" DSDD	£0.25
Disks 3.5" DSDD Branded	£0.31
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Disks 3.5" DSHD Formatted	£0.27

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Fusion/Lola L-1000 Genlock	£99.99

Second User Bargains Available Now!

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P/X 2x Ext CDROM with Squirrel	£70.00
P/X Motorola 68040 25Mhz CPU	£52.00
P/X NewTek Digi View	£20.00
P/X Rombo Vidi Amiga 12	£30.00
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Amiga Standard External PSU £14.99

PRIMA ATOM HEAVY DUTY PSU **Only £50**

- High Quality 200 Watt PSU
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1078 Weird Textures	£13.00
LSD & 17Bit Comp. Vol 1	£18.00
LSD & 17Bit Comp. Vol 2	£18.00
17 Bit Software Level 6	£15.00
AGA Experience 3 (NFA)	£14.00
Amiga 3 Title Bundle	£6.99
Amiga Repair Kit	£35.00
Aminet 8	£9.00
Aminet 14	£10.00
Aminet 16	£11.00
Aminet 18	£11.00
Aminet 20	£11.00
Aminet 23	£11.00
Aminet 24	£11.00
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Artworx	£9.00
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Cash Book Controller 3.5"	£23.00
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Civilization	£16.00
Weird Science ClipArt	£9.00
CD Animations Double CD	£9.00
Deluxe Paint 5	£20.00
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Light ROM Gold	£12.99
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Meeting Pearls 3	£9.00
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Net & Web 2 (Hi-Soft) 3.5"	£49.99
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Network 2	£13.00
Network PC Weird Science 3.5"	£18.00
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PGA Tour Golf + 3.5"	£16.99
Power Scan Software 3.5"	£50.00
Prima Shareware Vol.1	£2.99
Raytrace! The Official Cd-ROM	£26.00
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Sci-fi Sensation 2 (2CD)	£18.00
Secal V1 3.5"	£30.00
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Wordworth 7 3.5"	£40.00
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X-OUT	£0.50
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All Software subject to availability

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AMIGA FORMAT

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Brainstormer G3

- *Superfast G3 accelerator for Zorro III*
- *PCI bus*
- *68K emulation*
- *WarpUp PPC software*

A5000

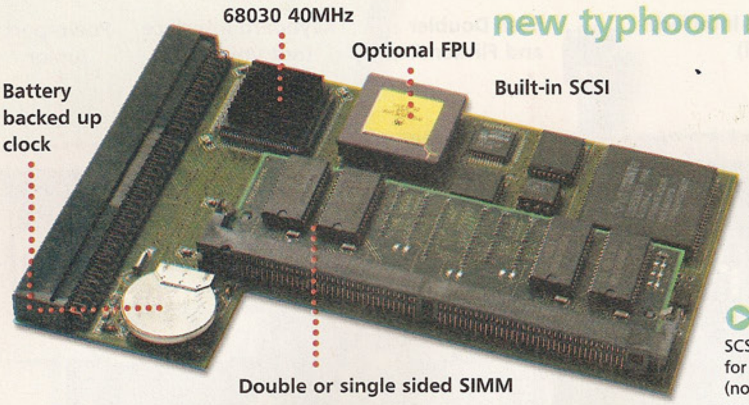
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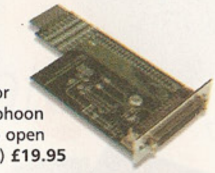
http://www.escena.de

http://www.powerc.com

new typhoon mk2 board



SPECIAL OFFERS
Typhoon MK2 inc.32MB (w/out SCSI) £139.95
Typhoon MK2 inc.64MB (w/out SCSI) £175.95



SCSI adaptor for MK1 Typhoon (no need to open your Amiga) £19.95

new typhoon mk2 accelerator

Full 68030 40MHz with MMU, optional 40MHz PGA FPU, SCSI included (no need for SCSI adaptor), fit up to 64MB RAM (any double or single sided 72-pin SIMM), battery backed up clock, 50 pin SCSI connector on board including software and manuals (suitable for all our towers and A1200 desktop)	£99.95
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New Typhoon Lite, bare board with on-board SIMM/FPU socket, not SCSI upgradable	£69.95
External SCSI adaptor for Typhoon Mk1 (Amiga 1200 desktop) inc. bracket & screw, opening your Amiga is not required	£19.95
SCSI II cable, 50-pin D Centronic or 25-pin D suitable for external SCSI device	£14.95

a2000 accelerator boards

Apollo full 68030 25MHz with MMU, including FPU, Up to 64MB of Fast RAM	
Apollo full 68030 50MHz with MMU, optional 50MHz FPU, Up to 64MB of Fast RAM	£159.95
50MHz FPU for above	£29.95

a600 accelerator board

Viper 630, full 68030 33MHz with MMU, including FPU, Up to 32MB of Fast RAM, PCMCIA friendly	£65.95



cd-rom drives internal/external

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36x External ATAPI CD-ROM (tray loading)	£94.95

(External includes cables, 4-way buffered interface with IDEfix 97 fully registered software and 2 CD titles)

SCSI cd-rom drives

32x Internal SCSI CD-ROM (bare, tray loading)	£89.95
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(External includes cables, Squirrel SCSI interface with software and 2 CD titles)

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2xW, 8xR Internal ATAPI CD-Recordable (bare unit)	£229.95
2xW, 8xR External ATAPI CD-Recordable	£279.95
2xW, 8xR TwinBox ATAPI CD-Recordable with 2.5GB IDE Hard Drive	£429.95
2xW, 8xR TwinBox ATAPI CD-Recordable with 32 speed ATAPI CD-ROM	£379.95

(All the above external bundles include: case, cables. 4-way IDE interface with IDEfix 97 fully registered, MakeCD and 10 blank recordable CDs)

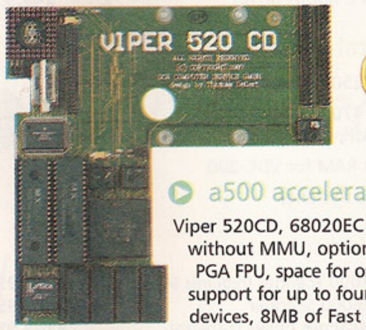
For any external removable device we offer the PowerFlyer instead of the 4-way buffered interface for £49.95

a1200 accelerator boards

Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, optional FPU (PLCC 33MHz only)	£65.95
Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, FPU 33MHz	£75.95
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GVP 1230 40MHz inc. 16MB (upgradable to 32MB) including 40MHz FPU and SCSI upgradable	£99.95
GVP 1230 50MHz inc. 16MB (upgradable to 32MB) including 40MHz FPU and SCSI upgradable	£119.95



a500 accelerator

Viper 520CD, 68020EC 33MHz, without MMU, optional 33MHZ PGA FPU, space for one 2.5"HD, support for up to four IDE/ATAPI devices, 8MB of Fast RAM on board and 3.0 Kickstart ROM including full 3.0 Workbench disk set FAT Agnus slot to fit Mini Mega Chip	£99.95
Mini Mega chip (2MB Agnus chip and 1MB extra Chip RAM)	£79.95

memory expansion boards

A1200 4MB not upgradable, with battery backed-up clock	£39.95
A1200 bare with standard SIMM socket with battery backed-up clock	£39.95
A1200 with standard 4MB SIMM socket with battery backed-up clock	£45.95
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memory modules and fpu's

for accelerator and expansion boards

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40MHz PGA FPU	£20
50MHz PGA FPU	£29.95

amiga 1200 magic pack

A1200 3.1, 2MB 68020, AGA chipset, Wordworth 4.5SE, Turbocalc 3.5, Data store 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organiser 1.1 Pinball Mania and Wizz games	£179.95
As above with 260MB Hard Drive fitted	£219.95
As above with extra 8MB RAM	£259.95

Plug and play hard drive. Includes cable and is already partitioned



hard drives

2.5" 810MB IDE including IDE cable	£69.95
2.5" 3.2GB IDE including IDE cable	£159.95
2.5" 4.1GB IDE including IDE cable	£195.95
2.5" 5.0GB IDE including IDE cable	£219.95
3.5" 2.5GB IDE including IDE cable and install disk	£99.95
3.5" 3.2GB IDE including IDE cable and install disk	£129.95
3.5" 5.1GB IDE including IDE cable and install disk	£159.95
3.5" 6.4GB IDE including IDE cable and install disk	£174.95

(5.1 and 6.4GB HD are supported automatically by the PowerFlyer or by IDEfix 97 using the patch provided, an updated FileSystem is available on www.amiga.de) Please note that cables included with 3.5"HD have standard 40pin headers. If you need to connect a 3.5" HD directly to the A1200 motherboard, you will need a special "stack" cable 44 high density (2.5") to 40 standard (3.5") IDE cable £12.95

squirrel interface

Squirrel interface - suitable for any scsi-device	£39.95



iomega zip

Zip 100MB external SCSI including Amiga Zip tools, & cable (requires Squirrel or any SCSI interface)	£139.95
Zip 100MB internal ATAPI including 4 way buffered i/f, Idefix97 software, IDE cable and 1 cartridge	£119.95
Zip 100MB internal ATAPI (bare unit only)	£75.95
Zip cartridge	£12.95



floppy drives

A500/A600/A1200 Internal Drive	£34.95
A2000 Internal Drive	£39.95
PC880E External for all Amiga models	£39.95
XL 1.76MB External for all Amiga models	£65.95
XL 1.76MB Internal for A4000	£60.95



LS120 drive

LS120 120MB Internal ATAPI including 4 way buffered i/f, Idefix97 software, IDE cable and 1cartridge	£99.95
LS120 120MB Internal ATAPI (bare unit only)	£69.95
LS120 120MB External ATAPI including 4 way buffered i/f, Idefix97 software, IDE cable and 1 cartridge	£139.95
LS120 cartridge	£9.95

a1200 power tower

Power Tower Bare	£129.95
Power Tower 1 Power Tower plus A1200 motherboard, mouse, PC keyboard and FDD	£349.95
Power Tower 2 Power Tower, A1200 motherboard, mouse, PC keyboard, Typhoon 68030 40MHz, 8MB of RAM, 3.2GB Hard Disk, IDE buffered interface, IDE Fix 97 and FDD	£579.95
Power Tower 3 Power Tower, A1200 motherboard, mouse, PC keyboard, Typhoon 68030 40MHz, 16MB of RAM, 32x CD-ROM, 3.2GB Hard Disk, IDE buffered interface,IDE Fix 97 and FDD	£629.95
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power tower accessories

PCMCIA "V" adaptor	£19.95
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"Y" cable to mix CD audio to the Amiga audio	£9.95
Internal to External SCSI adaptor (Internal 25 pin female connector, Internal 50 pin header External 25 pin male connector)	£19.95
SCSI II converter from(PPC) 50 pin high density to 25 D male, including extension cable to the Int/Ext SCSI adaptor	£29.95
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50 pin female to male Centronic lead	£14.95
25 pin D female to 50 pin male Centronic lead	£14.95
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5 way 50 pin header flat cable (SCSI)	£14.95
7 way 50 pin header flat cable (SCSI)	£19.95
Ultra WIDE SCSI cable made on request	£POA
Standard 3 way IDE cable (3.5")	£4.95
44 high density IDE cable 5cm	£4.95
44 high density IDE cable 10cm	£7.95
44 high density IDE cable 80cm	£14.95
44 high density (2.5") to 40 standard (3.5") IDE cable	£12.95
Internal floppy extension cable (34 pins) for Towers	£4.95
Parallel Printer cable	£12.95
Serial Modem cable	£9.95
Internal to External male to female 9 pin D Extension lead for Surf Squirrel Serial Port or similar products	£4.95
200 Watt speakers	£35.95
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4way buffered interface/EIDE'99 s/w

- Supports all IDE and ATAPI removable devices
- Autoboot from Zip and LS-120 drives
- 4 IDE/EIDE/ATAPI devices support
- 2 x 3.5" connector, 2 x 2.5" connector, separation and buffering of control signals for both ports
- Works with A600/1200 (kickstart 2.04)
- Up to 10% faster than IDEfix'97
- Buffered interface also works with IDEfix'97
- Support HDD 4GB (up to 32GB) by way of automatic HDD split into 4GB logical units, which guarantees 100% compatibility with the Operating System
- Allows large disks to operate with every filesystem OFS, FFS, AFS, PFS-2

4way Buffered Int. & EIDE'99 s/w	£24.95

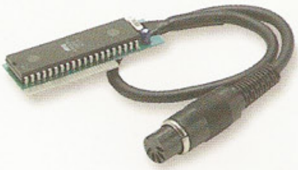
I/OBlix Zorro 2 Interface -
4 x serial, 1 x parallel
(optional 2nd port)
for the A2000/4000
£99.95



Not universal



Universal PC/Amiga



power tower



keyboards & interfaces

A1200 desktop universal keyboard int.	£19.95
A1200 tower universal keyboard int.	£19.95
PC Keyboard interface only (A1200)	£19.95
Amiga Keyboard interface only (A1200)	£19.95
Original A4000 keyboard only*	£39.95
Original PC keyboard only*	£14.95

***requires keyboard interface**

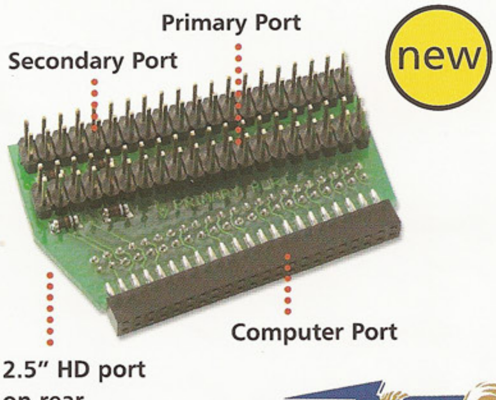
new amiga 1200 motherboards

A1200 motherboard without ROMs	£99.95
A1200 motherboard with ROMs	£125.95

A replacement motherboard is usually the best long term solution if you have a damaged or unreliable A1200.

amiga 3.1 operating system

Amiga 3.1 OS for A1200/3000/4000 ROM chips, disks and manuals	£45.95
Amiga 3.1 OS for A500/600/2000 ROM chips, disks and manuals	£39.95
Amiga 3.1 OS disk set and manuals	£19.95
Amiga 3.1 OS A1200/3000/4000 chips only	£29.95
Amiga 3.1 OS A500/600/2000 chips only	£25.95



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CD-ROMS



Suitable for Amiga CD32 & Amiga 1200/4000 with CD-ROM Drive.



Curses! The evil old witch has done it this time... she's gone and turned the Prince of the Magic Kingdom into a bright green frog and made off with his loved one... Sometimes life, even in the Magic Kindom, is just not fair! But life by the riverside was not to be all doom and gloom for our once regal, yet now green and warty chum... As luck would have it, a strange and powerful elixir (which goes by the name of Lucozade™ in modern times) floats down the stream and catches his attention... Intrigued, our soon-to-be-hero takes a huge swig, after a few minor explosions he becomes the legend that soon will be... ***SUPERFROG!***

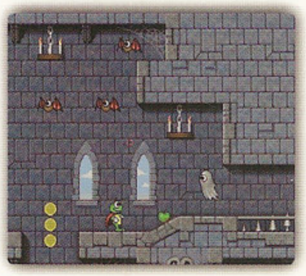
With boundless courage and new heights of determination, he sets off toward the Magic Forest with three objectives in mind. One, to get back his girl, two, vanquish the curse and three, give that nasty old witch just what she deserves!

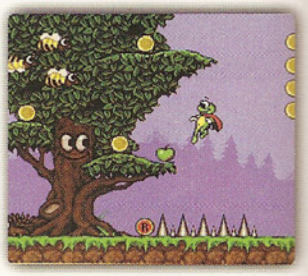
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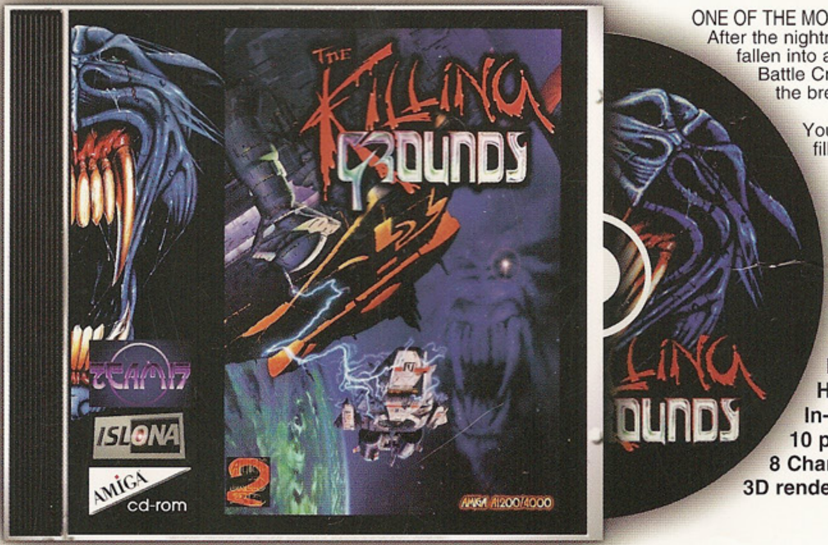
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